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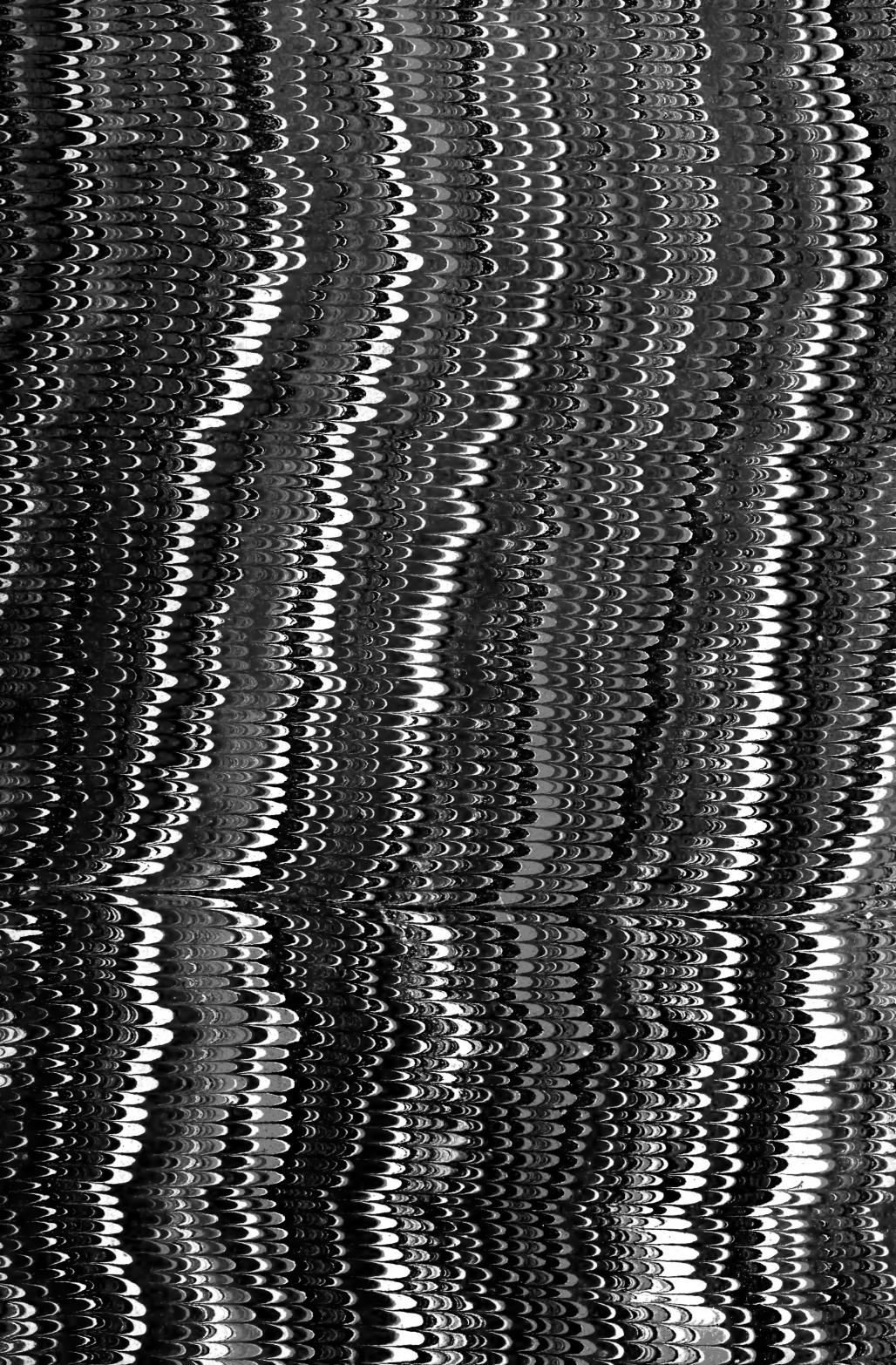
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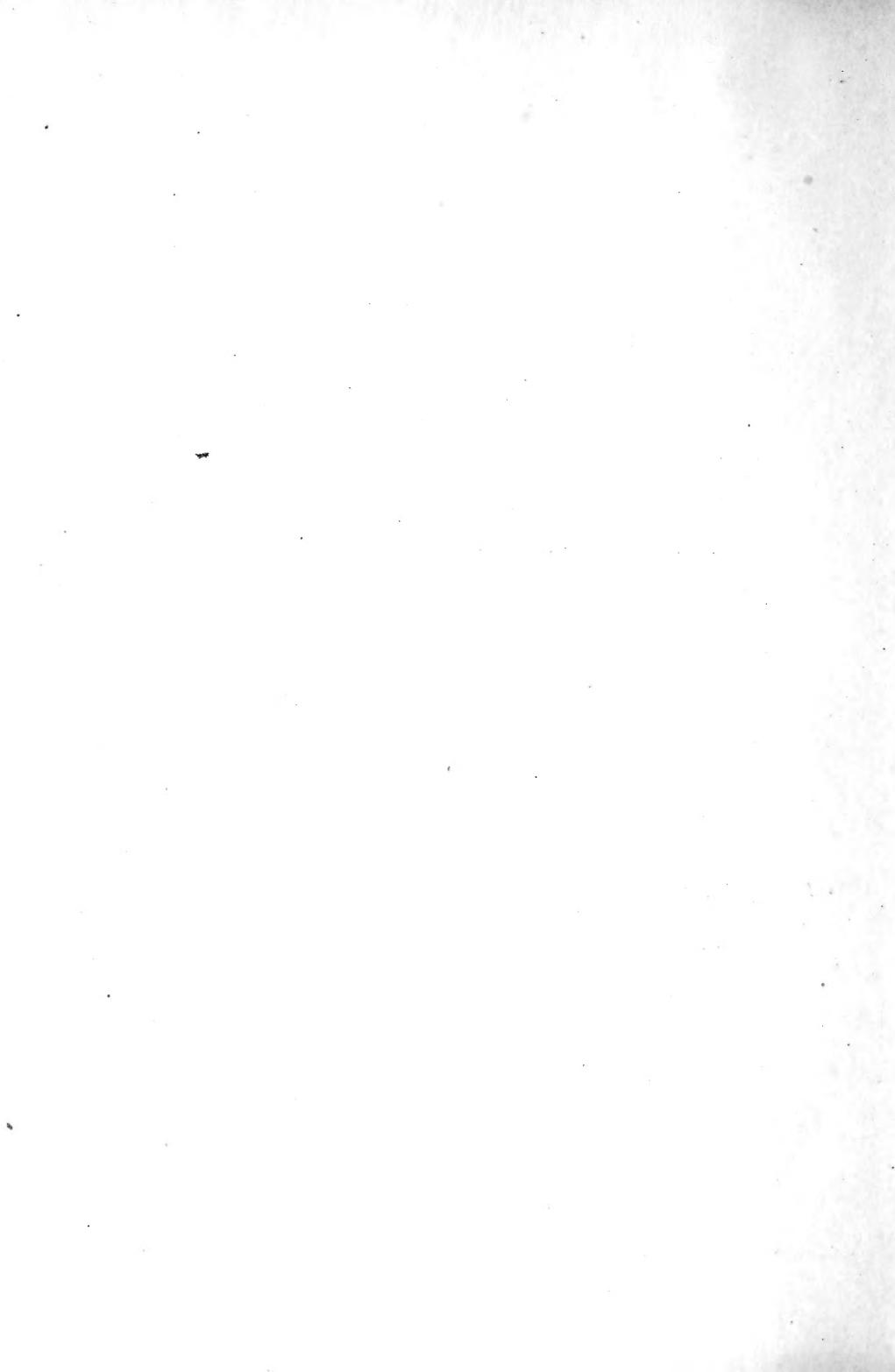
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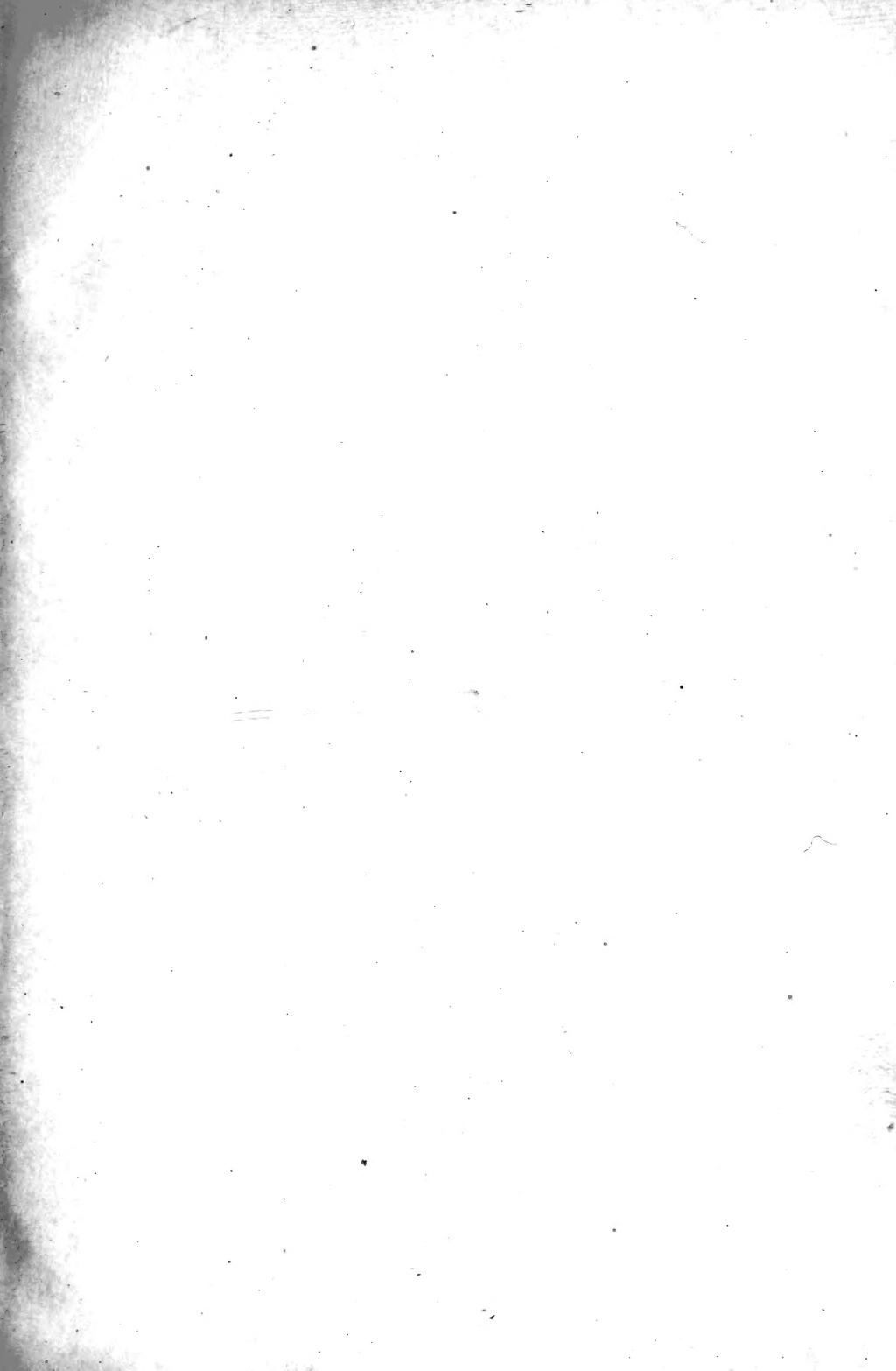
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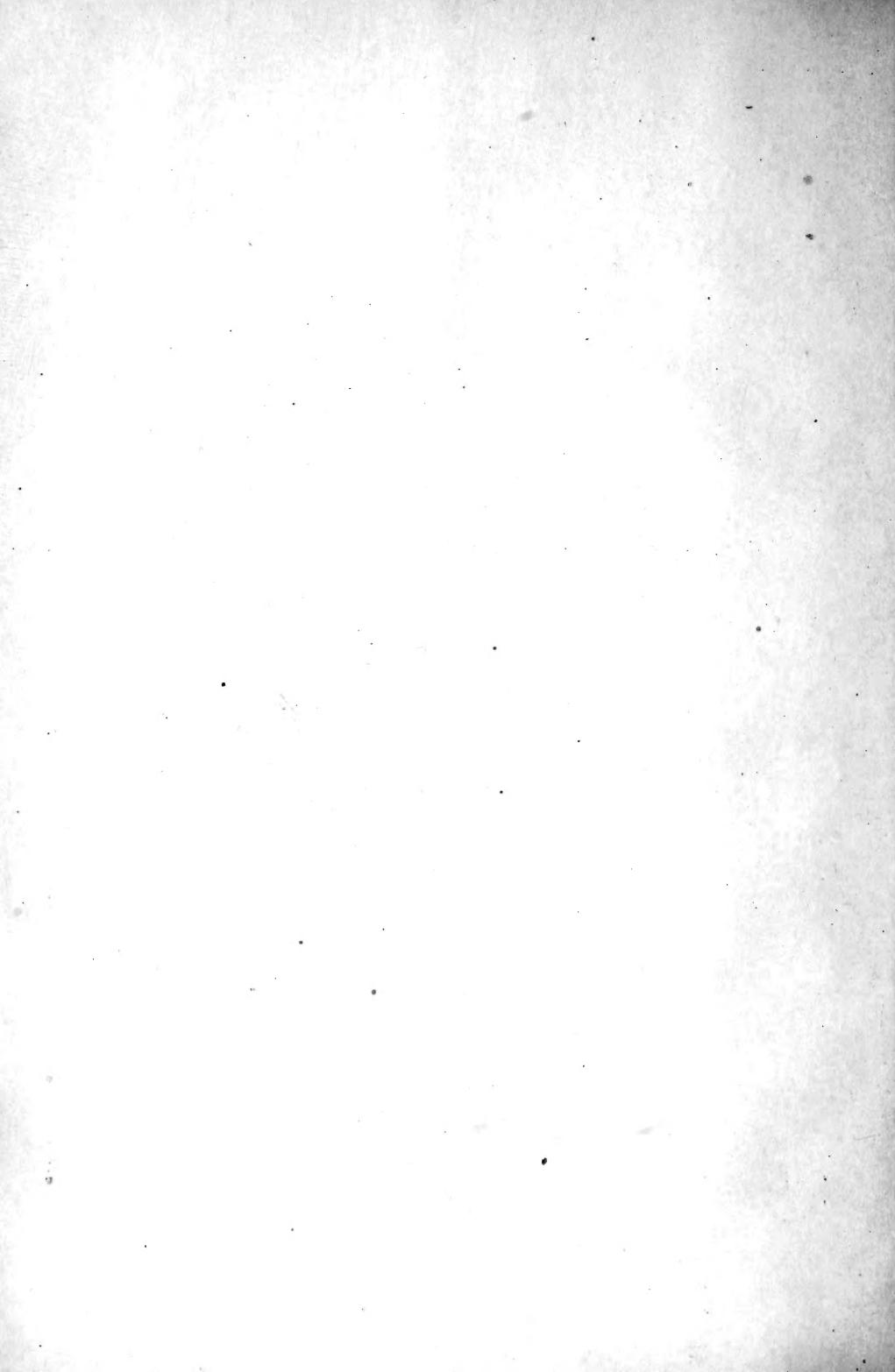
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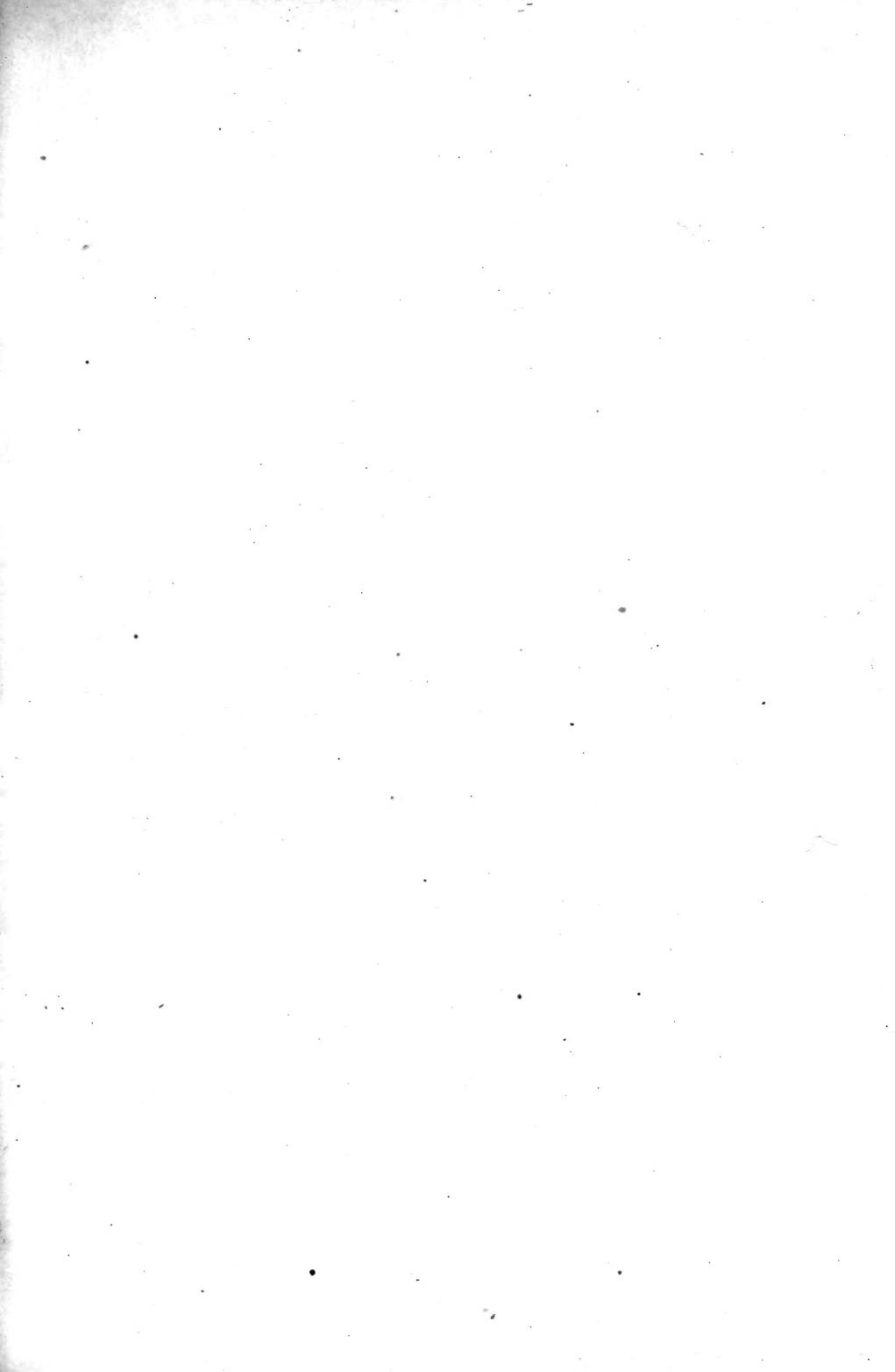
UNITED STATES OF AMERICA.











THE HISTORY

OF THE
EDUCATION

INSTITUTION OF HOBART

THEIR HISTORY TILL 1864

BY

CHARLES H. THOMPSON

OF THE UNIVERSITY OF HOBART

AND OF THE HOBART INSTITUTE

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CHARLES H. THOMPSON

THE HORSE:

1886

A TREATISE ON THE

EDUCATION

AND

Management of Horses,

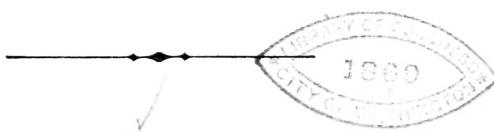
THEIR DISEASES AND REMEDIES.

TO WHICH IS ADDED

A Treatise on the Management of
Cattle and Dogs,

BY

PROF. H. PRUDDEN.



LOCKPORT, N. Y.:
M. C. RICHARDSON, BOOK AND JOB PRINTER,
(Journal Office,) 91 Main Street.

1869.

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H. PRUDDEN,
in the Clerk's office of the District Court of the United States, for the Northern
District of New York.

PREFACE.

The author of this work having had a long experience in handling some of the most vicious horses in the country, and having met with entire success, would offer his work to all lovers of this most noble animal, the Horse. We bring this system before the public, in printed form, so that all who favor us with their patronage may be benefitted thereby.

In treating upon this theory, we are well aware of the disadvantages under which we labor; and perfectly conscious of the prejudices which we are apt to excite in men who, having managed horses for a considerable extent of time, and having a way of their own with which they are usually satisfied, are likely to say humbug to any idea which to them is new and strange. There also exists in the minds of many intelligent persons an opposition to all professionals endeavoring to improve the horse. This opposition arises from the many failures among that class, and the consequent damage done to animals handled by such men. We do not expect to obliterate these prejudices, but have courage to hope from past experience that if we are given a careful hearing, and our theory put fully into practice, we can improve the opinions of the people beyond all doubt on the subject of Horse Education. We are about to introduce to you one of the most easy, practical, and improved systems of horse-training ever known. It is our desire to make this a reliable and valuable book of reference. It will be found not only to correct many of the

errors generally entertained in regard to the successful management of horses, but to give a full explanation of the principles of our present improved system.

Our treatment of diseases is taken from some of the best Veterinary Surgeons in the country, and are accounted reliable.

INTRODUCTION.

Our object in presenting this little work to the public, is to alleviate as far as possible the sufferings of that noble, and much abused animal, the horse. And, also, to teach man, who is his natural master, the best, easiest, and most practical way of making him a kind, willing, obedient servant to do his bidding. God made man in his own image, and to him was given the control over the beasts of the field, the fowls of the air, and the fish of the sea ; and, in order that man may successfully exercise that control over the animal creation, God has endowed him with a superior order of intellect. It cannot be denied that animals possess understanding,—instinct, we call it ; but it is an instinct capable of education and government.

All have heard of, or seen wonderful feats performed by animals, birds and serpents ; and even swine, that are supposed to possess the smallest degree of intellect, have been educated and made to perform wonderful feats of intelligence. But man has a higher order of understanding, which the animal creation does not possess. Man reasons from cause to effect, and it is to mind and not to matter that he looks to explain his reasoning ; for his mind is capable of expansion to an almost unlimited extent, while animals reason only from experience. No animal, trained to wonderful and seemingly impossible feats, has the power to impart his knowledge to another creature. Each, for himself, must be taught by man, or learn by experience, if at all. A horse's sense is good common sense. Many a man knows less, in

proportion to his intellect, than a horse, and, in the same proportion, a horse is much easier taught. There are in horses, as in man, much difference, some being more intelligent than others. A horse is not naturally suspicious, but, while young, is timid, and soon learns that teeth and heels are his only weapons, and flight his greatest security. His boldness and "the glory of his nostril" comes when he "rejoiceth in his strength;" with his age comes the knowledge of his power, and if he has never been mastered, never made to yield to any will but his own, if he is to be made useful to man, the struggle must come sooner or later, and the will of the man, or that of the horse, must triumph. Let a horse once learn that he can gain an advantage over man by the use of his heels, and he soon learns from experience that he can break the slender shafts and free himself from the buggy, and he will become a kicker and a runaway; another rears and falls back or sideways; so with biting and all other bad habits of a horse. The horse is possessed of superior strength, and man of superior mind. Hence it is evident that our power over him is not physical power only, as of brute over brute, but of mind over matter, or of a superior over an inferior order of intellect. Should we attempt to measure our strength with that of a horse, he would be the victor in every case. It is therefore evident that we are dependent for our mastery over the horse, upon our skill and ability to use our superior understanding in such a way as to overcome his strength. In other words, we must out-general him in order to bring him under our control, and make him do our bidding. And in order to do this successfully, we must understand something of his nature and the laws by which he is governed.

REMARKS

On the Nature and Disposition of the Horse.

We believe that the horse is governed by his animal instincts and nature, and that he has no rational conception of mind or thought ; yet we contend that he can be educated more easily than any other animal known to civilization, if taken in conformity with the laws of his nature. We will first give you the three fundamental principles of our theory, those principles being founded in the leading characteristics of the animal :

1. That he is so constituted by nature that he will not offer resistance to any demand made of him which he fully comprehends, if made consistent with the laws of his nature.
2. That he has no consciousness of his strength beyond his experience, and can be handled according to our will, without force.
- 3: That we can, in compliance with the laws of his nature—by which he examines all things—take any object, however frightful, around or on him, that does not inflict pain, without causing him to fear.

We take these assertions in order : First, then, we will tell you why we think the horse is naturally obedient. The horse, though possessed of sensitiveness to a greater degree than man, is deficient in reasoning power—has no knowledge of right or wrong, or will of his own independent of government, and knows of no imposition practiced upon him, however unreasonable those impositions may be, consequently he can come to no conclusion what he should or should not do—because he has not the reason-

ing powers of man to argue the justice of the thing demanded of him. If he had taken into consideration his superior strength, he would be useless to man as a servant. Give him knowledge in proportion to his strength, and he will demand of us the green fields as his inheritance, where he will roam at will, denying the right of servitude to all; but God has wisely formed his nature so that it can be acted upon by the knowledge of man, according to the dictates of his will, and he might well be termed the unconscious and submissive servant. Then we can but come to the conclusion that if the horse is not taken at variance with the laws of his nature, that he will do any thing that he comprehends without making an offer of resistance.

Second, The fact of the horse being unconscious of the amount of his strength, can be proven to the satisfaction of any one who will take the trouble to observe him for a day.

Third, That he will allow any object, however frightful, to come around or over him, that does not inflict pain.

Fear always arises either from the effect of imagination or from the infliction of pain, frequently from both causes combined. For example, let a horse become frightened at the cars, the noise of a wagon, or sound of a drum; if, in his struggles to free himself, his heels come in contact with the cross-piece or whiffletrees, he associates that hurt with the first cause of fear; and whenever, afterward, his heels come in contact with the whiffletrees, he remembers the former fright and is equally alarmed. But let him once, according to the laws of his nature, be convinced of the harmlessness of the object, and he ever afterward will regard it with the utmost unconcern. All experience proves this. The worst horses in the country have been cured of fear of robes, blankets, umbrellas, newspapers, &c., &c. We have never known it to fail, that as soon as the horse was convinced of the harmlessness of any place or object, he ceased entirely to regard it with fear.

The horse in his natural state, roamed over the broad fields uncontrolled and untamed, and there would have been no need of subdueing him by force had there been no law of his nature

violated. Man, being possessed of intellectual resources, can devise and invent means by which he can overcome the superior strength of the horse and subdue him. Here lies the secret and foundation of our system of managing and subduing wild and vicious horses. In the first place, we must impress upon the mind of the horse most thoroughly an undoubted sense of our superiority and strength, and to do this too in such a way as not to arouse his resistance. In the second place, so disconcert and control him under all circumstances, as to impress upon his mind most forcibly, the utter impossibility of any successful resistance to our power or strength ; in fact, to beat him upon his own ground with the apparent ease and certainty of positive ability, without resorting to harsh means or inflicting pain. In the third place, teach the horse exactly what you want him to do, and be sure that he fully comprehends what is required of him. And in the fourth place, by uniform acts of kindness, win the confidence of the horse, and teach him that you are his best friend, and in a short time he will learn to associate with your presence, a feeling of protection and security.

Here we would call attention to one of the first principles of our system of education ; it is, caress the horse kindly for doing right. If you wish to encourage a boy and tell him he has done right, you pat him on the head, and say, "good boy." So with an animal.

Patting and caressing kindly, conveys to them the idea that you are pleased with them, that they have done right, and there is no animal more sensitive to this kind caressing than the horse ; he always understands it to mean "that's right," that you are pleased with him. As an illustration of the truth of this statement : we once had a horse, nine years of age, brought to us to be taught to back. Several men that were acquainted with him said it could not be done. They came to see the fun, they said. They had seen four men work at him an hour at a time, and, with their united strength, could not make him back at all ; they had a very severe bit in his mouth, which had cut it very badly. We

worked at him a short time, and got him to take just one step back with one foot. We then caressed him kindly, and, on taking hold of the reins again, he stepped back four steps. We then caressed him again, and he got the idea of what was wanted, and he would back all over the ring, and would back readily whenever we wished him to. We saw the owner a few days after, who said he was all right, that he would back all day if he kept saying "back." The fact was, the horse had never before understood what was wanted of him.

The horse's confidence and rebellion being usually the result of long experience in successful resistance, his subjugation must be made convincing by repeated proofs of being over-matched, and that resistance is useless. For since his willfulness and rebellion are based upon the limited reasoning of his experience, he must be thoroughly convinced by experience that unconditional submission is the only alternative, and this you cannot prove to the understanding of the horse without repeating your lessons until he submits unconditionally. His submission should be encouraged and rewarded by kindness and caressing; that master is supreme in his control, and submission to his commands becomes a pleasure, who has the power to enforce his will, but who exercises it with the sweetening encouragement of love.

While force is necessary, and you have the means of making your horse almost a plaything in your hands, let the silken cord of love be the cement that fixes and secures his submission to your will. It is admitted that a good-natured, clever man, can teach a horse almost anything, and it has become a proverb that "kindness will lead an elephant by a hair." So the horse should be treated with kindness and consideration. His spirit should be curbed and directed—but not subdued. Man has the right of control, restraint, correction, and even destruction of life, but he must bear the consequences of those violations of the laws of his nature to which he is thereby subjected. Show your horse exactly what you want him to do, and endeavor to use the patience and reason in teaching and controlling him, you would at least believe

necessary for yourself if placed in like circumstances. Ignorant of the language and intentions of a teacher, who even preserved his patience and refrained from abuse, what progress would you make as a pupil, if placed in like circumstances, gifted as you are with all your intelligence? If possible, enoble and elevate your feelings by relieving your responsibility to yourself, to community, and to the noble animal committed to your charge. Make your horse a friend by kindness and good treatment. Be a kind master, and not a tyrant, and make your horse a willing and obedient servant.

There are a few simple, common sense rules, which, if followed, will commend themselves to the horse as well as to the driver.

First. Always feel kindly towards your horse, no matter what he does to you ; and never, under any circumstances, show temper or get excited. Remember the horse knows instinctively just how you feel.

Second. Never go near a horse if you are afraid of him. He will know it and take advantage of it before you acknowledge it yourself. We once knew a man who brought home a kicking horse. His man took care of him at night and in the morning, the horse showing no disposition to kick. But the first time he attempted to go near him after learning the horse was vicious, he kicked at him. The man was not conscious of showing signs of fear, but the horse felt it.

Third. Never undertake anything with the horse that you do not know you can carry out.

Fourth. Don't be in a hurry. Teach the horse what you want of him, as a child learns his alphabet, one letter at a time ; and be sure that he knows each simple thing, before you attempt to teach him another, repeating the lessons often.

Fifth. Reward each effort to do as you wish by caressing, whether he means it, or does it accidentally. Punish for doing wrong, but reward for doing right.

Sixth. Be sure that it is *your* will, and not his, that conquers in every case.

Seventh. Never, under any circumstances, deceive your horse ; and never say whoa ! unless you want him to stop. Have a separate and distinct word for every command, and let him understand what it means and nothing else. How many times we have heard men say whoa ! back ! haw ! when the haw ! was all they wanted. And again, how many times you see men drive a nervous, excitable horse, and keep saying whoa ! all the time to quiet him down. Now, if you learn your horse that whoa ! means anything or nothing at all, how can you expect him to stop at the word ? Use the word steady ! as something else to quiet him ; but never say whoa ! unless you want him to stop.

Horsemanship has reached its present stage of perfection by a gradual process of experiments and discoveries. In all man's inventions and discoveries, he has invariably commenced with some simple principle, and gradually developed it from one degree of perfection to another.

The first hint of the power of electricity was Franklin's bringing it down on the string of his kite. Now it might be said that man has entire control of the subtle element—making it the instrument of transmitting thought from one extremity of the globe to the other with a rapidity that surpasses time. And the great propelling power that forces the wheels of the steam-car over vast continents, and plows the ocean and rivers with thousands of steamers, was first discovered escaping from a teakettle. And so the power of the horse, second only to the power of steam, has become known to man only as observation and investigation revealed them.

We teach the theory that the horse is a teachable creature, and that his mind can be educated, and when fully and properly taught, it is as durable as life—except the principles taught are forced from his mind by systematic missmanagement—and we believe the horse is much easier taught than man. We claim for our system a superiority over all others, for this reason : that all other general systems that have been introduced have been both laborious and dangerous to man and beast, while our system is both

safe and easy—from the fact of its being a natural one. We further contend and believe that our system of training the horse is the most perfect now known, and challenge the world to confute the principles on which it is based.

The system of horse training, as practiced by J. S. Rarey, was the best system known at that time. But there were very few men that had the courage, the muscular strength, and the ability to conquer a vicious horse on the Rarey plan.

But the new system which we teach, and which was discovered and brought to perfection after years of careful study of the nature and disposition of the horse, and which is now practiced and taught by use, is both safe, easy, practical and lasting. By it a horse becomes a mere play-thing in our hands.

The resistance of the horse is exactly in proportion to the confidence he has in his own power or ability to resist control, and anything which reduces that confidence, reduces his disposition to resist. Loss of food or drink, bleeding, physicing, severe pain or violent exercise, all have a tendency to prevent resistance, just in proportion as they reduce vitality, and destroy his confidence in himself. It is on this principle that the Indians of our western plains, and the South Americans, break their wild horses.

They first catch them with a lasso, and then ride them with whip and spur, until, from exhaustion, they become gentle and submissive. Disabling the horse by strapping up one or both fore legs, is a more direct method of accomplishing this end, and has long been regarded as a great secret in the art of controlling horses. So long ago as 1762, an account was given in Bartlet's Gentleman's Farrier, of this method, which was then described as Dr. Bracken's. In 1825 an account was given in Bell's Life, published in London, of the wonderful powers exhibited by a man named Bull, over horses, which was also described as being accomplished by this method. The fame of the once noted Whisperer Sullivan, who flourished sixty years ago in Ireland, was unquestionably based upon the practice of this means of subjection.

A man named Offut, claims to have practiced this method of subjection in this country as long ago as 1825, and to have sold the secret to Mr. Rarey. Mr. O. H. P. Fancher, who is well known in the New England States, claims to have practiced this method for many years, and advertises having given Mr. Rarey his practical instructions in the use of the art. But Mr. Rarey established the precedence of his claims to the public attention, and identified his name with this theory of management, by his exhibitions of power over a number of bad horses in England in 1858, and also in this country about the same time.

Mr. Rarey deserves great credit for bringing his theory before the public, and reducing it to a practical system.

Mr. Rarey's plan of subduing the horse was, first, to strap up the left fore leg, then to put a strap on the right fore leg, between the foot and fetlock, bringing it up over the surcingle, and holding it in one hand. Then, by pressing against the horse until he attempted to take a step, he would pull his foot from under him, bringing him on his knees. The horse would then come up and down on his knees, until, becoming exhausted, he would lie down.

Rarey says he will generally lie down in ten minutes, but we have seen horses that would not lie down in half an hour, if at all.

The Rarey plan of controlling a vicious or a runaway horse was by means of foot straps, which were brought back to the buggy, and held in the hand with the reins ; then, if the horse should become unmanageable, his feet could be pulled from under him, bringing him on his knees. Many a horse has had his knees injured, if not entirely ruined, in this way.

By our new system we are enabled to subdue a horse and bring him under control at once, and effectually, without giving him time to get excited or to offer much resistance. We can lay him down ten times in a minute, if we can get him up fast enough. We have done it sixteen times in a minute, by the watch, and it is not necessary to go within twenty feet of him to do it, so that the operator is at a safe distance.

To illustrate the principle. A few years ago wrestling was a favorite sport with young men, and often with older ones. Suppose a man succeeds in throwing his opponent; if it has been difficult to accomplish and taken some time, the other will feel ready to try again as soon as he is rested. But if the victor should be able to throw him ten times in a minute, and apparently without much effort, he will be ready to yield, perceiving, at once, the other's superior strength.

So it is with the horse. Although he resists a little at first, he is soon convinced of his utter inability to help himself in the least, and yields.

Another very essential point, and wherein we claim lies our greatest success, and the superiority of this system over all others, is the manner in which we reach the intellect of the horse, and teach him what we want him to do. We always caress him when he does right, but *never* when doing wrong, and he soon learns that a caress means that we are satisfied that he has done right. We see the truth of this demonstrated every day.

Even when he does right from accident, we caress him, so that he understands, at once, what is wanted of him, and is ready to do it again. We educate the head instead of the heels. If we can get the attention of the horse, at the head, we take it away from his heels. The horse is so constituted that he can only think of one thing at a time.

We contend that a horse is always ready and willing to do whatever is required of him, if he fully comprehends what is wanted, and has not learned by experience that he can gain an advantage by resistance.

The Wild Colt.

As the training of the horse must be based upon the observance of those principles of his nature requiring the exercise of his reason in everything forced upon his attention, and of conveying to his understanding most clearly what is required of him, it is

advisable to commence our lessons on the management of horses by explaining how to proceed with the wild colt: First, prepare your barn, or such place as you design for your training room. Everything tending to annoy or excite your colt—hens, hogs, or dogs, must be driven out. Endeavor to be all alone with your horse. Do not suffer the curious—who will be anxious to judge of your ability, as they would term it,—to crowd in. Guard against such a nuisance, if possible, and as such persons are usually slow to take a hint, be decisive in your wishes, observing that it is a positive condition of your instructions. Your object next is to get your colt into his place, which you must do as quietly and gently as possible. You can accomplish this best by leading in and hitching in his view another horse. The colt will, generally, soon walk in of his own accord, but if he should not, do not be in a hurry to drive him in. Walk quietly around him, and gradually give him less room by closing in upon him. Be slow and careful, and he will not run or become frightened. Give him time to examine and look around, and in a short time he will walk in. When in, remove the old horse as quickly as possible. There are two ways of haltering, either of which will answer. We will give both ways, and the operator may adopt the one best suited to the case. The first is to approach and familiarize yourself to the colt until he will let you approach readily and handle him as you please, when the halter may easily be put on. The *other* is to get the halter on before you have succeeded in gentling him much. In ordinary cases, the first one will be the most practicable, but if the colt is extremely wild and nervous, the latter is preferred: because a much quicker method, and does not excite.

First Method for Ordinary Cases.

As soon as he appears quiet and reconciled to the restraint of the enclosure, go cautiously and slowly towards him, making no demonstration at all, but talking gently, or singing, as you please. He does not understand your language, and you talk or sing the

sooner to reconcile him to your presence and attract his attention. If he begins to walk away from you, stop, but continue your talking and singing, and appear as careless as you can about his presence, until he becomes quiet again. Then start again and leisurely approach him as before, and so repeat as circumstances require until you are close enough to touch his withers, or permit him to smell of your hand, should he seem so disposed. Then allow him to eat something that he likes from your hand—such as oats, apples or salt. Salt and sugar mixed in equal proportions, they are generally very fond of. Remember you must be patient and gentle in all your actions. Now touch him on the withers, gently, and gradually win his confidence so that you can handle and rub his neck and finally the head. Do not try to hold him or to impose the least restraint ; that would cause him to become excited and afraid of you. Fondle the colt in this way until he becomes reconciled to your presence, and will suffer you to scratch or handle him as you please. Now step back and take your halter quietly. The halter should be of leather. Rope halters are objectionable, for young horses in particular ; they are so hard that they hurt the head whenever the colt pulls. Being hurt, the colt will instinctively try to get his head out of the halter, and the more he pulls the more it will hurt, because the tighter and harder it will pinch—which will frighten him the more—and he will try to free himself at all hazards, until he pulls himself down or possibly breaks the halter. In that case, his experience would have been a bad one, for you would have taught him to be a halter-puller.

You should take the halter in the left hand, having unbuckled it, and approach the colt slowly ; don't be in a hurry ; give him time to smell and examine every part in his own way. While he is examining the halter, caress and rub him, and it will further your efforts greatly to give the colt something he likes. Then take hold of the long strap which goes over the head, with your right hand, and carry it under his neck, while you reach the left hand over the neck and grasp the end of this long strap ; then lower

the halter just enough to get his nose into the nose-piece, and then raise it up to its proper place and buckle. This is the best method to halter a colt, if he is not extremely wild ; but if your subject is wild and nervous, the following method is much the best.

Second Method.

First provide yourself with a light pole, about ten or twelve feet long ; cut a notch in one end with your pocket-knife, and about fifteen inches from this end drive a nail in, the head bent a little towards the end having no notch. Next you want a good strong half-inch rope, about twenty or twenty-five feet long, with a slip-noose in one end and a knot in the rope about twenty inches from the end with the noose, so that it will not draw so tight as to choke the colt down, but will allow the noose to draw tight enough to shut off his wind to that extent as to prevent him from making a very obstinate resistance. Now get a short breast-strap, or a long haim-strap will do. This put in your pocket convenient to the right hand, for future use. Now approach the colt slowly and carefully, as before described, remembering that visitors must be excluded. If you are alone you can work faster and better than it is possible with company. When you succeed in approaching to within four or five feet of the withers, retreat slowly, as before, and take your stick, previously prepared, holding the notched end from you, and swinging it very gently a little to the right and left in a horizontal position. This is a new object of fear to the colt, and will be regarded with a good deal of suspicion. However, a little patience will soon enable you to get so near the colt that you can hold your stick gently over the back and withers. Then gradually lower it, moving gently as before till the hair of the main is gently touched. As this is borne, let it drop a little lower until it rests upon the main. Now commence scratching the main with a stick, gently but firmly. This will please the colt and cause him to stand still. While scratching with your stick in this way, slide your right hand slowly and

cautiously along its surface until you get to the mane, when you scratch with the hand in place of the stick. All this is proving to the colt that you will not hurt him—in fact, you please, and hence he submits quietly. Now step back to where your rope is, and take the noose and place it on your stick, letting it rest in the notch and on the nail, with the main part of the noose hanging below the stick, and large enough so as to be slipped over the head easily, while you keep the other end of the rope in the hand with the stick. Your halter or noose now hangs upon your stick so spread that you can put it over the colt's head without touching a hair. Your halter arranged, holding it before you swinging upon the stick, you approach the colt in the same cautious manner as before until you bring it to the nose. This being a new object of fear to the colt, he will smell of it cautiously. While he is smelling it, you are gradually raising it over his head—so gently, he does not feel or care about it, until you get it well back of the ears, then turn your stick and your noose will drop on his neck. If he does not start, take up the slack in your rope gently, at the same time approach his withers cautiously, and rub him gently if he will allow it. If he should endeavor to run away, keep hold of your rope. If he tries very hard to get away, he soon finds himself out of wind, caused by the pressure of the rope about the neck, consequently he will offer but a feeble resistance, and will very soon allow you to come up to him just as you please. Now you should use him gently. As soon as he will allow you to approach, loosen the noose from his neck, and by kind words and caresses, let him know you do not wish to hurt him. Keep on gentling him till he will allow you to rub his neck, head and ears. Encourage him by feeding from your hand something that he likes. When he submits so far as to let you handle his head and neck, take the other end of the rope and tie a round hard knot in the end and another knot about twenty or twenty-five inches from the end. This knot should be left slack. Now take the end of the cord in the left hand, and carry it under the neck to the opposite side, while you reach over with the right

hand and take it and bring it over the top of the neck again. Now put the knot in the end of the cord through the other and secure by drawing it up as tight as possible. This is commonly called a cow knot. Now make a loop by drawing a double of the slack rope under the rope around the neck. Make the loop long enough to slip into the colt's mouth, which can be done easily by gently insisting on his confidence. A green colt is not bad about taking anything in its mouth, if you use judgment and do not frighten them. Slip this loop well up above the bridle teeth, and place the lip well over the jaw under the rope. Now draw up on your loop, and take the noose you first had about the neck, off entirely. Now take hold of the end of the cord. You will find you have a means of power in your hands that makes the strongest horse almost a plaything. And this we call the *Spanish halter*, and its value in managing and training colts cannot be over-estimated, when used with judgment and handled with adroitness and skill. It should never be used so harshly as to excite extreme pain, and yet with a touch that causes a fear of resistance. You now have on your colt your Spanish halter, and can control him almost at will. If he should endeavor to run away from you, give him a quick, sharp jerk; at the same time say whoa! and repeat as often as he may make the attempt to get away. When he stops, go up to him and caress and gentle him about the head and neck. When he gives up to the rope enough so that he does not try to get away, then proceed to learn him to lead. With your rope in hand, step back to his side, opposite his hips, and say "come here, sir," at the same time giving him a sharp pull on the halter. He will swing round towards you, and if he only takes one step in the right direction, let him know that was what you wanted. To make him understand that he has done right, go up to his head, speak kindly to him, call him a good boy, at the same time petting and caressing with the hand. Then walk round on the opposite side and repeat. Encourage him for every step taken in the right direction by caressing and kind words, and in a very short time he will come to you

at the word, and follow you around like a dog. If the colt is willful and stubborn, handle him with the Spanish halter until he will stand quietly, then take your strap, previously provided, in the right hand, holding by the buckle. Now commence raising gently the fore leg next to you. If he resists your efforts, reprove him with the halter, and keep on caressing and rubbing the leg till you can take the foot in your hand ; then slip the strap around below the fetlock, putting the end through the keep on the inside of the buckle, draw it up tight so it will not slip up, then pass the strap around the arm, from the inside of the leg, and bring over to the outside and buckle. By putting him on three legs, he can offer but little resistance when pulled by the head sideways, and, as he does not reason, will come round as readily with his legs free as he will on three. Now step back on a line with the hips, holding the halter firmly, and say, "come here, sir." He, of course, does not obey, so you pull on the halter, and he is obliged to swing round to you. Now step to the other side and repeat ; bring him around by the halter each time, until when he hears the words, "come here," he will obey readily. As soon as the colt submits to this step, remove the strap from off the leg and rub the part gently where the strap has been. Now step back and sideways, as before, and say, "come here, sir." If he does not come readily, give him a sharp pull with the rope, which shows him you can handle him as well on four legs as you can on three. Now if he moves a little to obey, caress him, and so continue until he will follow you readily.

How to Handle the Feet.

After submitting sufficiently to lead well, caress and rub him on the withers, as at first, and, as soon as he will bear, work down the shoulder and leg ; then lift lightly on the foot ; if it is submitted, rub it quickly and smoothly a few seconds, then put it down and take it again, and so continue until you can handle the foot as you please. The main point for you to consider is, that

you are to make the colt understand you will not hurt him, and to do this you must be gentle. Now place your hand on the withers and run it back over the side and hips softly and quickly ; handle every part thoroughly as you work along towards the leg, and as the colt will bear, work the hands around the leg until you reach the foot. If there is no resistance, lift it up a little—just a little—and if there is no resistance, after letting it down, rub and gentle a little more ; repeat, each time lifting it up a little higher, until you can take it up and handle it just as you please. Should he, however, resist and jerk his foot away from you, you must resort to means to make him understand that resistance is out of the question. In tampering with the colt, you should have your Spanish halter on, as before described. Now take the long rope that you hold in your hand, put it around over the top of the horses head, just back of the ears ; then bring it down on the right side of the head, and instead of passing it through the mouth, bring it under the upper lip and over the gums above the teeth, across the sensitive nerve ; now bring it up on the left side of the head, and pass it under the cord on that side ; now when you pull upon the cord, you have one of the most powerful means of controlling the horse that has ever been invented. This we call the *Double Spanish Halter*. Now take the end of the rope in your left hand, and proceed as before to handle his legs and feet. If he stands quietly, use him gently ; but if he should resist, correct with your rope—by which you can inflict so severe a punishment that he will submit unconditionally in a very short time, and allow you to handle his legs just as you choose. Persevere until you can hold the foot in your hand, moving it gently in the same way, then let it down and rub the leg until he gets over the fear inspired by the use of the cord under the lip. If more thorough treatment is necessary, see “Management of Horses Bad to Shoe.”

To Make a Colt Follow Under the Whip.

After he comes round to you readily by pulling a little on the

halter, and follows freely, take your whip in the right hand, pull upon the halter a little, saying, "come here, sir," at the same time tap lightly with the whip over the hips. He will yield to you mainly because you have taught him to yield to a slight pull upon the head, and to come to you at this signal, and because he wishes to get away from the touch of the whip behind. As soon as he comes to you, caress and feed him something that he likes from your hand. Repeat this until he comes to you as readily by tapping with the whip as he did at first to the halter. Now, instead of hitting with the whip, commence by snapping it behind him. If he comes, caress and encourage him as before, and so repeat at each time, increasing the distance from him, until he will follow or come to you readily by cracking the whip. We give this method because it is simple, and, in our judgment, practicable to most any one, and will bring the desired result in a short time—indeed, so well as to make your horse follow you around the streets without halter or bridle.

Teaching the Colt to Ride.

First, halter-break the colt so that he will follow readily and come to you at the word. Then put on the double Spanish halter and have some one get upon his back. Then mount and dismount as long as he shows signs of fear. When he resists, correct with the Spanish halter ; and when he submits, caress him kindly. If he resists and does not come to time with this treatment, then strap up one leg, and he will not be able to offer much resistance ; when he submits, unstrap the leg. Then lead him a little at first, treat him kindly, and you will have no further trouble. If the colt is put through a regular course of treatment, as described in "Breaking with One Lesson," he may then be mounted and rode without any trouble.

To Teach the Colt to Back.

Put on the Spanish halter ; stand directly in front of your horse, having hold of the cord about twenty inches from the head

with your left hand, resting your right on the cord six or seven inches from the head, you now say, "back, sir." Your horse does not know anything about what you want, of course, and does not obey. Immediately after saying back, press down and back with your right hand sharply on the cord, which will set the head back with a jerk. Do not expect your colt to go back without a struggle of resistance. Repeat this four or five minutes, being careful not to get excited. As a rule the colt will not go back with one lesson, probably not with the second, but will be sure to do so at the third lesson. The more intelligent and spirited the colt, the sooner he will submit, and the more ready his obedience. The duller and slower your subject the more patient and persevering must be your efforts. Another way to teach the colt to back, and the one that we usually adopt, is to first break him as described in "Breaking with One Lesson," page 28. Then put him before the cart and try and back him with the reins. If he resists, have two or three men get hold of the cart and pull back; then pull upon the reins and say "back." Don't expect too much at first. If he takes only one or two steps back, stop and caress, and he will soon back readily at the word. It is now time to commence biting your colt.

Bitting the Colt.

Some people seem to have strange notions. It would seem as if the style and position of the head depended entirely upon the attention given to bitting. The object of bitting, it should be borne in mind, is to teach the horse to obey the rein, and, at the same time, habituate the horse to give the head and neck as high an elevation as the form and temper of the animal will bear. But while it is admitted that careful attention to bitting will improve the style and bearing of the horse, it should not be forgotten that the position in which the horse carries his head in harness will depend almost entirely upon his form and temper. No art can give the horse with a low, perpendicular shoulder and short neck,

a fine style of carrying his head and neck—even if he possesses good courage and spirit. The practice of straining the head and neck into an unnatural position, and keeping it so for hours, as is practiced generally in bitting, is very cruel, besides being often a cause of injury. When the head is strained up into an unnatural position, and kept there for a long time, the colt will learn to relieve the pain and weariness he feels, by resting the entire weight of his head upon the bit, and which teaches him to lug upon the bit, and causes the mouth to become insensible to pressure. We will now explain what we regard as an improved method of bitting, which teaches the horse exactly what you require and does not injure the mouth in the least, and by which you can bit a horse well in about one hour: by limiting your lessons to five minutes and repeating until the head is rendered freely and readily to the purpose of the rein, seldom requiring more than six or eight lessons of five minutes each. We would never hit a colt until he has first learned to drive, as described on page 29.

How to Make a Bitting Bridle.

Take your Spanish halter, made exactly as before described with the exception of the loop that goes round the neck; that should be made large enough to fit over the neck rather tightly where the collar is worn. Now bring your cord through the mouth from the off side and bring back on the near side through the loop around the neck; now pull on this cord, and the head will be drawn back to the breast. You are now prepared to bit. Simply pull upon the cord a little which will draw the head back slightly; after holding for a short time, render loose; then draw a little tighter and tie with a single bow knot, that will loosen with a slight jerk. Now by slipping the cord back on the top of the neck, you will have as fine a curve of the neck as you may desire. Continued for four or five minutes; then stop bitting, and repeat at some future time.

The great secret, not only in biting, but of training the young horse in any manner, is in not confusing or exciting him to resistance by training too long. When your colt yields readily to the bit, you can check the head to suit. Making the check rein rather tight causes the head to be carried high, while the delicacy given the mouth will prevent the nose being thrown forward. This method of biting may be regarded with little favor by those not understanding its effects, but all we have further to say on the subject is, give it a fair trial. Teach your colt to be perfectly submissive to your handling, in every manner; to lead well; back freely at the word. You are now ready for the next step in his training, which is, usually, driving in harness.

Training to Harness.

Put on your harness carefully, which should be made to fit well, and great care should be used in having it safe and strong in every respect. Do not be tempted to drive your colt in an old rotten harness, or to hitch to an old rotten, rattling wagon, as such things are liable to give way at any time. Many of the accidents causing horses to become subject to bad habits, are the results of such imprudence. Let every step be made sure. Work safe, and you are sure to bring about a good result. With your harness on, allow him to stand in his stall until he becomes somewhat used to the presence and pressure of the different parts, and will allow you to rattle them about without his caring for them. Now lead him around for a short time, and as soon as he appears quiet, check him up loosely, and take down the reins and drive him around in the yard. When he becomes familiar with the harness, check and reins, and will stop and start at the word, and drive around to the right or left, you can drive him about the streets with safety; though in making this step, you had better have your Spanish halter on for safety. You should then drive to sulky. We prefer a sulky at first. Let your colt

see and examine every part of the sulky until he cares nothing about it, then draw it up behind him, rattling and running it back and forth a few times, then attach the harness. Before starting him, back him up against the cross-bar of the shafts. If he should act frightened, speak to him calmly but firmly, at the same time holding your reins firmly, so as to prevent him from swinging round if he should try. Then go to him and rub and caress him until he gets over his excitement. Then run the sulky up against his haunches, at the same time soothing him by gentle words, until you can shove the sulky against him just as you please, and he not care anything about it. Now you can get into your seat and drive him around wherever you choose without danger. Let him go slow at first, until he becomes familiarized with the objects that are new to him along the road, as he is not so liable to become frightened while going slow as when driven fast.

Driving.

When your horse drives well before a sulky, then you may hitch him to a light wagon, or by the side of another horse; and if you are breaking him for a farm or for hauling heavy loads, you can gradually increase his load until he will draw to the extent of his ability without comprehending that he has the power to do otherwise. After your horse is sufficiently broke to the harness, you can either allow him to carry his head as nature may dictate, or by the proper use of the check-rein, bring his head and neck into such position of style as his form and temper will bear, or your fancy dictate. In teaching your young horse to drive well, do not be in a hurry to see how fast he can trot. Although your colt may be old enough to learn how to move well, and perhaps drive as gently as an older horse, he is not old enough to perform the work of an older horse fully matured. Require but little at first, gradually increasing as he develops in strength and hardens in his gait. Care should be taken to keep each pace

clear and distinct from each other. While walking he should be made to walk, and not allowed to trot. While trotting, as in walking, care should be taken that he keeps steadily at his pace, and not allowed to slack into a walk. When occasionally pushed to his extreme speed in the trot, he should be kept up to it only for a few minutes at a time, gradually requiring more as he becomes practised and capable of endurance; and whenever he has done well he should be permitted to walk a short time and encouraged by a kind word. Under no circumstances should what is termed "his bottom" be tried and overdone. The reins while driving should be kept snug, and when pushing him to the top of his speed, keep him well in hand, that he may learn to bear well on the bit, as it is by means of the reins, mainly, that the horse when going at a high rate of speed is kept steady in his place. But while you should teach your horse to drive well to the pressure of the bit, be careful not to give him the habit of pulling too hard; for then he becomes not only unpleasant, but difficult to manage. The art of driving well cannot be taught by any written instructions. Practice and ingenuity in this respect can alone make a skillful horseman. Always strive to encourage, not drive your horse—and be careful not to whip only for merited reproof. The too frequent use of the whip will cause the horse to plunge ahead every time he sees any unusual movement for it, or at any mishap that may occur.

Great care should be taken not to drive the colt too much at first, and, at no time, to the extent of exhaustion. Be careful never to break his courage. There is usually too much anxiety to try a colt's speed and bottom. He is pushed, overdone, and spoiled, perhaps, before he knows how to trot, or is grown to his full strength.

How to Break the Colt in One Lesson.

We usually break colts in one lesson, so that, with careful driving at first they will remain kind and gentle; and we think

it altogether the best way, when we can have the conveniences for doing it. We first put the colt through a regular course of handling, as described in "*Subduing the Horse*," page 31, until he freely submits, then caress kindly, thus letting him know that you are not going to hurt him, but that all you require is submission. Now put the harness on him, and use a common single joint or snaffle bit. If he is vicious and you find it hard to control him with the common bit, we would use the double joint bit, as described on page 39, for a few moments, or until, we get control of the mouth. Tie the tugs tightly to the breeching, so that every time he steps he is drawing heavily on the collar, and at the same time pressing equally hard on the breeching.

Then have a rope or strap tied into the turret rings, so as to form a loop or ring about two or three feet long, pass the reins through these loops. Now take the colt by the head, and lead him until he learns to walk with the collar and breeching pressing hard both forward and behind. And he is learning to draw and to hold back both at the same time. Now take the reins in your hands, and when you wish to turn the colt to the right or left, step to one side, so as to bring the rein the length of the loop from him. It then acts half-way between a lead and a drive. Now drive him carefully round the ring, and when you pull on the left rein, say haw! and on the right, say gee! being careful to stop and caress frequently. He soon becomes accustomed to the bit, and is easily managed, and if he attempts to turn round you have him completely under your control. The reins coming so low down that you have leverage across his hind parts, so that it is impossible for him to wind up in the lines. He must come to the right or left whenever you pull upon the reins, and he soon learns the utter impossibility of any successful resistance. And by accustoming him to the bit, in this way you get control of the mouth, and accomplish nearly all that is sought to be accomplished by the old method of bitting. Now put the reins in the turrets, and hitch the colt before the cart without quarter straps, as described in "*Horse*

Taming Ring," and drive him first one way and then another until he becomes accustomed to the thills, harness, &c., being careful to speak kindly, and caress him frequently. Now push the cart against his heels, until he does not care for it; which will be as soon as he finds that it is not going to hurt him.

We would not attempt to teach him to back at this time, but leave that for another lesson. Let the colt rest for half an hour, and then drive him in the street, either single or double, or he may be driven immediately. Be very careful not to drive too far. Never break his courage by over-taxing his strength.

Horse Taming Ring.

We have an amphitheatre, built for breaking horses, with a board wall eight feet high and sixty feet in diameter, and covered with a canvas tent. This is for winter use. In summer we use a canvas side curtain. This is only for the convenience of moving easily. In the centre is the horse taming ring, about thirty-five or forty feet in diameter, made by setting posts and running ropes around. This ring is filled with saw dust, tan-bark, or straw, from three to six inches deep. If the ground is hard hard or frozen it would require more.

The necessary fixtures are, first—A breaking cart, with very strong thills,—so strong that it is impossible for a horse to break them, try as hard as he may. Second—A good, strong, common buggy harness. Third—A throwing harness, made as follows: Have a strong surcingle made, about four inches wide, and six feet, six inches long. It should be made of good strong heavy leather, and should have a strong buckle at one end. About four feet two inches from the buckle end have a ring attached for a back strap and crupper, like those on a common harness. Have a ring put into the surcingle about one foot from the buckle. This ring should be just right, so that when the surcingle is buckled on the horse, on the left side, the ring will come directly

opposite the left fore leg. Also have a ring put into the surcingle about a foot from the back strap, on the right side; now have a strap attached to the back strap near the crupper, and running to the ring on the right side of the surcingle. Fourth —A foot strap, made like a common hame strap, except it is to be longer and stronger every way. Such a horse taming ring may be erected in any barn, shed or other unoccupied building; or in a yard with a high board fence to exclude intruders. But it is better to be under cover, and should have a strong high post in the centre of the ring. But if a man has a horse to handle it is not absolutely necessary to have such a ring, but a smooth piece of grass free from sticks and stones is a good place, if out of sight, or most any place in the winter when there is snow on the ground.

Subduing the Horse.

To subdue and conquer the horse, and let him know that you are his master, you want to convince him that you are stronger than he is, in every place and position, and that he must submit to you in everything you require of him. To do this, you want to put him through a regular course of handling that will convince him of your ability to manage him just as you please, while at the same time you demonstrate to his understanding that he cannot help himself, and must submit unconditionally to your control. In the first place, then, give him a turn with the Spanish halter—making him stop at the word whoa! and come to you at the word. When he submits to that, proceed still further in convincing him of your power and mastery by throwing him down. To do this, put on the throwing harness, as described in "Horse Taming Ring." Strap up the left fore leg by passing the strap around the fetlock, put the end through the loop, strap to the ring in the surcingle. Now draw the end of your cord or Spanish halter through the ring on the right side, bringing it over to the near side of the animal; now take

the halter out of the mouth, thus leaving a plain loop around the horse's neck ; then take hold of your cord with the left hand and straighten it out. Now you have a plain double from the neck of the horse around to the ring on the right side ; you put this into the horse's mouth, and draw up the end of the cord with the right hand. You will observe that the cord runs straight through the mouth, instead of being in a loop, as in the Spanish halter. (Since writing the above we have invented a leather tube or bit for the cord to pass through, which prevents injury to the horse's mouth.) Now you have him completely in your power ; you can handle him as easily as a boy could a top. Now step back the length of your cord away from him, (you are now at a safe distance in case he should plunge and spring, and offer violent resistance, as is sometimes the case,) with the cord grasped firmly in your hand, say " lie down, sir," at the same time pulling steadily on the rope. His foot being fastened up he is easily thrown off his balance. He will gradually settle down on the knee of the near leg, when a quick pull will bring him over on his side. Now you have him down, use him gently ; rub his head and neck; talk to him kindly, thus letting him know that your object is not to hurt him—that all you require is submission, and that you possess the ability to enforce that. After letting him lie for awhile, make him get upon three legs, let him stand a moment, then put him down again. While down, handle his feet and legs as you please, and so continue until he will lie still and submit to you in everything you wish. Then take the strap off his leg and let him get up ; caress and rub his leg where the strap has been.

We would call particular attention to this method of throwing a horse. It is the easiest and most expeditious way now known, and is accomplished without any danger to either the operator or the animal. Whatever may be the bad habit of your horse, it is a very good plan to give him a regular course of training, and by throwing a horse down, and handling him just as you please while down, you demonstrate to the understanding of the animal that it is worse than useless to try to resist control. It is the best way we

have ever found to handle nervous horses, that would not allow their legs handled. After handling gently while down, they find they are not hurt, and get over their fear, and will allow you to do with them as you like, anywhere.

Kicking in Harness.

Kicking may justly be regarded as a bad habit, because of the danger incident to the use of such horses. It is well to remember that this habit is in most cases the result of carelessness or mismanagement. Proper attention is not given to the fitting of the harness; the straps dangle about the flanks of the colt, unacquainted with their nature, which frightens and causes him to kick. Or, what is more common, an old harness is used and breaks at some unlucky moment, which frightens the colt, and he kicks as a means of self-defense, when his feet and legs coming in contact with the whiffletree or cross-piece, causes him greater fright and he becomes reckless, springs ahead in a frantic endeavor to free himself from his tormentor, until he tears himself loose, or is stopped after being worried out with fright and exertion. Learning fear and resistance in this way, he becomes alarmed at the least indication of its repetition. This fear must be broken by familiarizing the horse with the causes of his fear, at a time when he is powerless to resist, and when he finds there is no danger of harm, he will cease resistance. In the majority of cases this habit is broken by our means of control, as described in "Subduing the Horse," page 31. When the horse gives up, and will allow you to handle his legs and feet as you please, and will submit to you in everything that you wish, then put the harness on him, and use a double joint or W bit, eight inches long, with the bars five and a half and two and a half inches long. With this kind of a bit on your horse, you want to drive him around your yard, occasionally saying whoa! at the same time setting him back upon his haunches with the bit. In a very short time he will stop when

you say whoa, without any pull on the rein ; then go up to him and caress him about the head and neck ; then take your whip and switch him around the hind legs and flanks lightly, and if he shows a disposition to kick or run, say whoa ! sharply, at the same time correct with the bit. In your first lessons, use the bit with severity—thus demonstrating to the horse your determination and ability to enforce obedience, under any and all circumstances of resistance. When you can drive him around with a whip at a trot, and stop him at the word without using the rein, go to him again and pat and rub him to encourage him in well doing. Then attach a long cord to your reins, and start him away from you at a trot, letting him go as far as the length of your cord will permit without pulling on the bit, when you will say whoa. If he stops, go up and caress him, and keep on in that way until he will stop and start at the word, no matter how far away he is, so long as he can hear your voice. After you have him so well in hand that he obeys readily and willingly, take the reins in your hand and learn him to back, encouraging him by kindness when he does right, and correcting with the bit when he shows the least intimation to be rebellious and stubborn. When he will back at the word, back him against your buggy wheels, keeping an eye on his movements, and if he shows fear and a disposition to get away from it, do not force him against it at first, but drive him around and up to it, letting him smell and examine it until he becomes satisfied it is not going to hurt him ; then back him up to it again—right back against it—and if he is disposed to kick, say whoa ! sharply, at the same time giving him a short, quick jerk with the rein. By this treatment he finds that you still have the same power in your hands that has already controlled him so completely and easily, therefore he submits unconditionally. You can now proceed to hitch him up ; watch him closely, and if any thing should excite him momentarily, and he should manifest a desire to repeat his old habit, say whoa ! and if he does not obey instantly, set him back with the bit in a manner that shall leave no doubt of your ability to control him at will. If handled in this

way for a few times, he becomes convinced of the uselessness of resistance, and careful management for two or three weeks will radically break the worst horse of this kind we ever saw. People have often expressed wonder at our success in managing kicking and runaway horses. They think the control the result of a peculiar gift, or that we use medicines or drugs of some kind. If such persons will reflect a moment upon the simple laws of the nature of the horse, they will see that we educate the head instead of the heels; that we do control them perfectly and thoroughly by the word whoa. In breaking to the word, we use means that compel obedience. If your horse minds the word quickly and stops at your bidding, he is not going to do you or himself any damage by kicking; for if you stop him whenever the old habit is brought to mind, and let him stand until the excitement is over, he will have no incentive for kicking, and in a short time will forget the habit altogether. We have handled some of the worst kicking horses in the States and Canada, and have always cured them of the habit in this way. We have never yet failed in a single instance. And if they ever returned to their old habits we never heard of it. We have had a good many so bad that they could not be used at all, and had not been harnessed for several years, and in one or two lessons, of one hour each, they have been perfectly cured, so that they have worked kind and gentle ever afterwards.

Kicking Straps.

There are several kinds of kicking straps in use, but we consider them of little importance, as the treatment described in "Kicking in Harness" seldom fails to break up the habit entirely, if carried out with firmness and perseverance. The manner of putting on the kicking straps is as follows: First, buckle a strong strap, with a ring slipped on it, around each hind foot, just below the fetlock joint. Now put on the Spanish halter, (or perhaps a rope a little longer and stronger would be better,) but instead of

putting it around the neck, make a small loop in the end, just large enough to go over the lower jaw, then pass it over the neck and through the loop at the jaw, bringing it back between the fore legs and over the girt, and tie to the strap on one of the hind legs. Now tie a similar cord into the loop at the jaw, bring back in the same way and tie to the strap on the other hind leg. Your horse is now in position ; if he kicks, it is against his jaw, thus punishing himself. There may be danger of a bad kicker injuring his jaw in this way. To prevent that, and perhaps it would be better in any case, put on a strong, common rope halter, run it back and tie to the straps on the hind legs as before. Another style of kicking strap, and it is the only one that we would recommend at all is this : Take your Spanish halter, double it and place the center of the cord on the top of the head, bring it down on each side and through the mouth above the bits, then bring it upon the opposite side, and through the gags of the bridle, then back through the turrets on the saddle. Have a ring fastened to the back strap near the crupper, pass both ends of the cord through it, bring one end down on each side and tie to the shafts, or it may be brought back and tied to the whiffletree. Now, if your horse kicks, he jerks his head upward. This disconcerts him ; he cannot well raise head and feet at the same time. If preferred, a leather strap, made like a check-rein, may be buckled to the bridle, brought through the bit rings and gags, then back to the shafts as above ; or if the horse is not very bad the regular check-rein may be lengthened out and brought back in the same way and tied to the shafts, instead of being hooked into the terrett. In either case have it just tight enough so that the horse's head is checked up about as you would naturally drive him.

The Runaway Horse.

This is the worst and most dangerous of all the bad habits to which the horse is subject, and at the same time the easiest of all

to cure. All you have to do with such a horse is to learn him what whoa means. Some men seem to think that the horse is not to blame if he does run away when he is frightened. But if he runs once when he is frightened he learns that he gets the advantage in that way, and he will run the next time when he is not frightened. What you want is to make such a horse know that he must not run, even if he is frightened. He must be more afraid of the word whoa! than of anything else. Handle with the Spanish halter, and by throwing the same as the kicking horse in harness, unless the habit is caused by fear of some object, such as an umbrella, buffalo robe or anything else that might frighten him and cause him to run away ; if that should be the case, when you have him down, take the frightful object—whatever it may be—around him, throw it on to him, at the same time rub and caress him ; let him know it is nothing that will hurt him ; then let him up, put it on or over him, rub him with it, and in that way familiarize him with it until he cares nothing about it. Then train him in harness with the W bit on, until he will mind the word whoa. Make him run, and if he does not stop at the word, stop him by the bit so suddenly as to disconcert him and destroy his confidence completely. Let him know that he must stop at the word. Now tie a long cord to each rein, and start him off on the run, letting him go the length of the cord, and then say whoa ? and if he does not stop set him back with the bit in such a way as to convince him of your ability to control him, even at a distance ; or you may have another person in the buggy, who is not to say a word, or let the horse know of his presence, and when he gets a few rods away you say whoa ! and he sets him back with the bit. The horse will think it is you that is controling him, and he will soon learn to stop at the word anywhere within the sound of your voice. Never say whoa ! to such a horse unless you want him to stop.

Although we have given a powerful means of coercion, and of impressing the horse of his inability to resist the power of man, still practical and thorough as those means are, they are of but

little account if not used with prudence and judgment. Men are too apt to depend upon main strength and stupid harshness for success in the management of horses. And with equal stupidity the basis of control we have here given may be made in the hands of some, a power to be abused with reckless disregard of consequences. Be Firm, Persevering and Prudent in the exercise of your power when it is necessary to impress your subject with a sense of mastery ; but be Gentle, Attractive and Affectionate when he is obedient and submissive. We find by experience that horses subject to bad habits are ungovernable in the mouth. If we govern the mouth well, we have, in almost every instance, a good control of the horse ; and it is an important requisite, under all circumstances, in the control of horses in harness. Then control while driving until thorough and certain obedience is insured to the word. Strive to tell your horse exactly what you want him to do, and do not confuse him by attaching different meanings to the same word. It is quite common to say whoa ! when it is intended to go slower, or to attract the attention of the horse when standing, to let him know of your presence. Now if anything should happen, and you wished him to stop suddenly, he would not be likely to mind without a pull at the bit ; and why should he, as long as he has been learned in that haphazard way that whoa ! meant anything and nothing at the same time? Such training confuses the horse so much that, though he is naturally obedient and tractable, he will become careless and obstinate. Have a distinct word for every command, and make him understand that every command must be obeyed. Speak in a natural tone of voice to your horse under all circumstances. Nothing confuses a horse more than screaming at him to have him hear. He is as acute in the sense of hearing as a man, and so sensitive, if nervous, as to have his pulse increased from six to ten beats a minute by one harsh word. Have your horse understand that things likely to frighten are harmless, and be sure not to whip for being frightened. If your horse is frightened at anything ap-

proaching, let him stand until it passes ; but hold the reins snug and firmly, or he may swing round and upset you. If cars are passing, and are regarded with fear, let your horse face them, but hold him immovable with the reins. Always, under such circumstances, talk encouragingly to him; remembering the slower you move him the more power you have over him. There is but little danger of a horse kicking after being stopped or while moving slowly, and so with the runaway. He will seldom make a second attempt at the time he has been foiled in his purpose or stopped. A horse frightened becomes reckless, consequently never raise an umbrella suddenly or unexpectedly behind a horse afraid of such things. First raise it at his head and gradually carry it back, and then, to make sure, if you have not a bit that will control your horse easily, put on a Spanish halter and carry it back in the wagon or buggy. Fear and anger is something that a good horseman should never exhibit in his countenance or voice, as the horse is a close observer and soon learns to take advantage of such indications to become careless, or excited by anger, and may become aggressive or unmanageable. Let your lesssons be thorough, but not very long. Be gentle and patient with the colt, but make the willful, stubborn horse feel the full extent of your power. Make the old reprobate know that the only alternative is unconditional submission to your will; though if he should become too much heated and excited, it is prudent to stop. and repeat the lesson at some future time; but repeat until there is a thorough and unconditional submission. After a horse submits, let your treatment be characterized by gentleness and good nature.

Balky Horses.

This habit is more perplexing to endure than any other the horseman has to overcome. The balky horse is usually high spirited, free in temperament, quick to comprehend, and sensative to causes of excitement. Kindness and patience would at first

have won him to a forgetfulness of the habit, but as an open and confirmed rebel, defying the powers of man to enforce submission, requires more than the patience incident to human nature to overcome. The balky horse is simply willful, and in breaking up the habit the object should be to convince him clearly, without resort to abuse or harshness, of your ability to enforce submission. We would here suggest that "an ounce of preventative is worth a pound of cure" in this and all other bad habits to which the horse is subject. Bad management is alone the cause of horses learning to balk. When the young horse balks in harness, it is not from any unwillingness to go, but from some confusion or excitement arising from some mismanagement. He is willing and anxious to go, perhaps, but too fast or too high spirited to make the steady push against the collar, necessary to move the load. Because he will not pull under such circumstances, he receives the curses and lash of the driver, which, not only make him mad, but discourage him, and he refuses to go. If your horse becomes confused and refuses to go ahead, do not, by any means, get mad and resort to the use of the whip the first thing; for in such a case, ninety-nine times in a hundred, the use of the whip will only strengthen the tendency to resistance into open rebellion, which is just what you do not want. As a general rule, a little patience and a few encouraging words will cause your horse to move on. But if your horse shows a decided tendency to resistance, get out and examine the harness carefully. Sometimes the collar is too large and hurts the shoulders, or perhaps the load is heavy, and you have forced your horse to draw until completely exhausted, and simply needs time to breathe before renewing the exertion. Consider circumstances. Your horse cannot talk and tell you the cause of the difficulty. Go to his head and talk to him gently, and rub him a little. After rubbing the head and neck, (for a horse of this kind must be flattered and coaxed, as you would find it necessary to do with a stubborn child,) for all he needs is a little time, and the fit will exhaust itself, and you will have no bad impression making a starting point for the habit. Gently move the horse's head to

the right and left, to show him that he can move the load. At the same time touch him lightly on the fore leg, below the knee, with the toe of the boot, or with a light whip. After moving once or twice in this way, he will generally start and move on. After your subject moves well and safely, gradually teach him to draw steadily, by first loading lightly and increasing as the horse will bear, until the habit becomes fixed and he will work cheerfully. In a good many instances when your horse balks, if you will sit right down and count one hundred without saying a word to your horse, then take the reins and turn him a little to the right and left, he will go off without further trouble.

But for an old balker, that has the habit confirmed by long and successful resistance, it will be necessary to give him a more thorough and decided treatment. This is one of the most difficult habits to overcome, and most trying to the patience. There is nothing that makes one ache to use the whip vigorously more than dealing with a balky horse. But all horsemen agree that whipping does more harm than good. We once heard it said that whipping a balky horse was like striking a woman, where you knock one devil out you knock ten in. The following is a good way to manage a horse of this disposition: Tie the hair of his tail together in a hard knot, then take the halter-strap in your left hand, holding the tail in the right—pass the halter-strap through the hair above the knot and draw up as short as the horse will allow without running round, tying quickly. This will bring the horse in the shape of a half circle, his head fast to his tail by the halter-strap. Your object is to break up his confidence in himself most thoroughly, and this is the most harmless yet most powerful of all means used to disconcert a horse on a practical basis. No horse can long bear up against the depressing influence of whirling in connection with the proper use of the Spanish halter. The nearer the head is tied to the tail the better, for the shorter and quicker the horse will turn, and the better the effect. Should he not run round very freely, touch him behind with a whip, which

will cause him to move sharply. Simply keep him moving until he falls down by becoming dizzy, which he will do in from one to two minutes. After lying a short time, untie the halter, when he will get up rather shaken in confidence; but one lesson is not sufficient if a bad case. Tie the head to the tail in an opposite direction, and "put him through" until he falls or is unable to move. By this time a "plucky" horse may become so warm by his exertion and struggles that he is not in condition to handle to advantage. If not too warm, however, put on your Spanish halter and give him a few sharp turns, to show him that you can handle him as well by the head as you can by whirling. When he follows and submits in this way freely, put him in his stall, caressing and talking to him gently, so as to let him understand obedience is all you require, and that you are his friend. The great secret of subduing a horse is to handle him in such a manner as to impress him most powerfully with your supremacy without causing pain or excitement. This you can accomplish best by making your lessons short, and repeating after the horse has time to reflect. A man does not like to match himself against an adversary who has handled him roughly and with apparent ease, of superior strength and ability, after his mind becomes cool and the ascendancy of reason prevails; and so with the horse. If possible, do not continue his training while excited, and you will be surprised to find how soon he will yield submission.

The most balky mule we ever knew was broken in this way by twice whirling. He worked true as an ox ever afterward. Another way of managing a horse of this kind is to put them through a course of handling, as described in "Subduing the Horse," page 31. We have known very bad balkers cured entirely of the habit in this way. Sometimes changing a horse, and working him on the other side will have the desired effect.

But the plan that we have found most effectual in breaking up this habit is, to change the word and say whish! If your horse balks, take him by the bits and pull a little to one side, and at

the same time touch him lightly on the fore leg with a light whip and say, whish! He will generally start a little; then stop and caress him. After standing a moment do the same again, only letting him take one or two steps, when you say whoa! Stop and caress, and never let him stop himself. He soon learns that you do not mean to hurt him, but all that is wanted to go ahead. Whenever he shows a disposition to balk, don't let him stop of his own accord, but say whoa! and, after standing a minute, say whish! and he will generally start without any trouble. Do not let him know that he can stop of his own accord, but whenever you see an inclination to stop say whoa! Don't jerk on the bit. Always drive a balky horse with a slack rein. Most balkers are made so by an injudicious use of the whip before they understand what is wanted of them. Never whip a balky horse in the harness. If you whip him at all, take him in the stable, and don't take a whip—he has had too much of that already—but take a short piece of clapboard, slap him over the haunches, and say whish! at every blow. This does not hurt, but it frightens him. He soon gets so that he jumps at the word, and, when you have him in the harness, if you say whish! he is ready to "skedaddle." We have never found a balky horse that we could not make work after a few lessons of this treatment.

If your horse balks double, a sure way to start him is to take a strong, half-inch rope, about fifteen or twenty feet long, place the center of it under the tail in the place of the crupper, give it a twist, or tie a single knot in it to keep it in its place, then bring it forward through the inside terret ring and over to the hame ring of the other horse. Have the rope just long enough to be a little slack when he keeps up his end. If he falls back or refuses to go, the other horse has him by the tail in such a way that he will be very apt to come to time. We would repeat, never whip a balky horse; it only makes a bad matter worse, and does no good except to gratify your own feelings. If your horse still refuses to go, put on your double Spanish halter, and fetch him first

to the right and then to the left with a sharp jerk. He will be very like to throw himself and refuse to get up. If so, take a dish of cold water and dash it into his nose. This will usually bring him to his feet at once. Then apply the Spanish halter again sharply. We have had horses of this kind that would hold out for two or three hours. But we never failed to conquer them in the end. The worst we ever had of this kind was in Toronto, a mare fourteen years old that had been handled by J. S. Rarey, and all of the horse tamers that ever came along, and had beat them all. She never went a rod in the world with the harness on. She was good to ride under the saddle, but couldn't be rode a step with the harness on. It took us over two hours to conquer her. But she has worked all right ever since.

Necessity of Familiarizing to Objects of Fear.

As we are taught, there are no effects without causes, and as the horse becomes fearless and confident so far as he understands there is no cause for fear, we should remove the cause of mischief as much as possible, by complying with those laws of his nature by which he examines an object, or determines upon its innocence or harm, and this is the more necessary in his early training, since first impressions are strong in the horse, and once learning suspicion, perseveres tenaciously to the apprehension of danger when once excited. Whatever the horse understands to be harmless, he does not fear; consequently great attention should be given to making him examine and smell of such as would be likely to frighten him in after life. A horse will never become satisfied in regard to an object that startles or frightens him by looking at it, but if you will let him approach it slowly and examine it in his own way by smelling it and touching it with his nose, he will very soon be satisfied it is not going to injure him, and he will care no more about it, and will never after frighten at it, however frightful it may be in appearance.

Objects of Fear.

In driving be careful about using the whip too freely. If a stone or a stump, or anything of the kind, should be regarded with fear, do not attempt to drive the horse by. Let him stand a short time and look at the object until he seems careless about it, then push a little closer, as he will bear, and so repeat—at the same time talking to him encouragingly, until you can drive him up to the object. Be sure to have your colt fully comprehend that such objects are harmless, as opportunity offers in this way, and he will soon become so fearless and confident as to be regardless of such things; but if you whip him for becoming frightened at such things, he will associate the punishment with the object of his fright, and be more frightened next time he sees it. The horse being unable to reason only from experience, you should convince him by careful examination that the object is harmless. For example, if the sight or smell of a robe at a few feet distant should frighten him, put on your Spanish halter and take him alone into your training yard or barn, lead him gently to the robe, let him smell of it if he will, then take it in your hand, hold it gently to his nose, then rub it against his neck, side, and over his back, and so repeat for a short time, and he will become so regardless of it, that after being familiarized to it in this way—you can throw it over his back, or tie it to his tail, without causing him the least fear.

To familiarize a colt to a drum, the same principle is to be observed. Let him touch it with his nose, then rub it against his neck and side, then place it on his back, now tap it gently with the fingers, gradually increasing as he will bear it, and in a short time you may play upon it quite smartly—even while resting on his back, and he will care nothing about. The same with the umbrella. Let him touch it first with his nose, while closed, then rub it over his head, neck and body, then commence at the head again, open the umbrella a little right under his nose, and thus accustom him to it until you can hold it, fully spread, over his head, and over and about him in any manner, and in a short time

he will not mind it. Teach him that a newspaper, though it is white and rustles, is harmless, by rubbing him with it, throwing it upon him like a ~~Blanket~~, dragging it about on the ground, and riding him about with it in the hand. In breaking the colt of being afraid of any object always have on your Spanish halter, and in bad cases put it on double. Then correct him at the mouth, when he resists, but be sure and caress him kindly when he submits. And always remember that you must familiarize your horse to the object from every point of view. For instance, you may be able to show him an umbrella or robe on one side, and he will be just as afraid of it as before if approached on the other side; or he may allow an umbrella to be raised over his head, but if it is raised behind him he will be frightened; consequently you must first let him smell of it to convince him of its harmlessness, and then show it to him on every side and position until he ceases to regard it with fear.

To accustom your horse to the cars, lead him to the depot and have him see them at rest and examine them carefully, even to smelling and touching with the nose. Then allow him to see them move as you have an opportunity. When you undertake to familiarize a colt or a horse to anything that frightens him, be sure and repeat your lesson until he cares nothing about the object. If you do not, the experiment will be of little advantage to your horse; in fact, it may render him worse. If your horse is afraid of the cars and you are in a place where they are going to pass near, get out of the wagon and take your tie strap and loop it around under the jaw of the horse and grasp it firmly with the hand close to the head; then while the cars are passing shake his head vigorously with short jerks so as to attract his whole attention to his mouth, and he will pay but little attention to the passing cars. A horse is so constituted that he can only think of one thing at a time.

To Train a Horse to Stand When Getting Into a Carriage.

There are many horses that are very gentle after starting, but will not stand for you to get into the carriage. Such will sometimes rear up and start very suddenly; or, if stopped, become obstinate and stubborn, and refuse to go when required. This habit is usually brought about by the mismanagement of thoughtless or ignorant drivers, in being hasty and harsh to a horse naturally ambitious but sensitive and impulsive. The naturally intelligent and tractable colt is taken from the field and harnessed up without regard to consequences. If he goes off gently, he is regarded as mild and gentle; but if he is restless, and does not go when required to, he is whipped, kicked and abused. The colt does not know what he is whipped for, and the result is he becomes stubborn and mad. If he goes it is with a reckless, rearing plunge, or he settles back and refuses to move. Such a horse learns either good or bad habits very readily, and is either very good and obedient—if well managed—or willful and stubborn to the last degree—if to the contrary. The first step in the management of such a horse, if a bad one, is to show him that his willfulness must yield to superior power. This you can best do by managing him as follows :

Put him through a regular course of handling, as described in "Subduing a Horse," page 31. Get a whoa! on him as described in "Kicking in Harness," page 32. By this time your horse is thoroughly convinced of your ability to handle him under all circumstances. Now put on the harness and hitch to the carriage. This should be done inside the barn if possible, with the doors closed. Have on the Spanish halter. Ascertain in the first place if he is afraid of the carriage. Back him against it, and bring him up to it, letting him examine it on all sides. Let him eat oats out of a measure set in the carriage. If it is a top buggy, raise and lower the top until he does not care for it. If he shows signs of fear, punish him by a slight jerk on the Spanish halter, and say

whoa! He has probably learned by this time that whoa! means to stand still. Work in this way until he will stand quiet and allow you to get in and out the buggy, handle the reins, etc. Then lead him out of the barn, pat and rub him on the head and neck, oblige him to stand, for he will not run over you. Then walk ahead slowly, stopping occasionally to caress and encourage him. In a short time you will find your horse will stand quietly for you to get into the buggy. For a few times after hitching, do not attempt to get into the buggy immediately before starting. Walk ahead, ask him to follow a short distance, and if he shows a desire to crowd on to you too fast, set him back with the Spanish halter. We have broken very bad horses of this stamp in four or five lessons by the halter alone; but the above method is more thorough. Always move your horse slow for some distance after hitching, and be very careful about using the whip at such times.

Kicking and Pawing in the Stall.

This habit is easily broken up. First, put on a good strong surcingle, with two rings slipped on to it, coming under the belly. Then take a short strap with a ring attached, and buckle around each foot below the fetlock. To these short straps on the forward feet, attach another strap, which bring up and pass through the rings on the surcingle and back to the rings on the straps on the hind legs. With this attachment on each side, the moment the horse kicks he pulls himself upon his knees, which he will be very careful not to do but a few times. Let your horse stand in his stall in this way until there is no disposition to renew the habit. Or, if your horse backs out of his stall and kicks at the back of the stable, swing a plank (about 2x8, pine, is heavy enough,) by ropes from the top of the stall; let it hang about on a line with the horse's hams. It should hang about twenty inches or two feet behind the horse when he stands in his proper place in the stall. When the horse backs up to kick, his haunches come in contact

with the plank, and he will kick, and when he kicks, the plank swings back and up, but when the hind parts of the horse come down, the plank swings back to its place and slaps him on the haunches. He will be very likely to kick again, but with the same result, and he is disconcerted and beaten on his own ground, and will be careful how he backs out of his stall to kick in future; in fact it punishes him so severely every time he attemps it that he is very careful how he throws up his hind parts anywhere afterwards. We have broke the worst stable-kicker we ever saw in one day with the plank, arranged as described above.

If your horse kicks with one foot, take a piece of trace chain, about one foot or eighteen inches long, run a hame strap through the end link, and buckle it around his foot, leaving the other end loose. When he attempts to kick he will whip himself with the chain, and soon stop it. If a horse paws in the stable do the same with the fore feet. If he kicks with both hind feet, put chains on both. Sometimes after you have fed your horse his oats, as you pass out of the stall, he will kick at you with one or both feet. To cure this habit put on the Spanish halter, bring the end back between the fore legs and fasten to the hind foot with a strap, as described above. Now if he attempts to kick he only kicks against his jaw, and soon stops.

Kicking While Grooming.

Such a horse is always nervous, excitable, and frequently very thin-skinned, and the currycomb hurts him, making him kick. If you have a very bad horse with this habit confirmed, it may be necessary to put him through a course of handling, as described in "Subduing the Horse," page 31. Then put on the Spanish halter, and, holding it in your hand, take the currycomb and begin at the neck, gradually working back carefully towards the places where he is tender. If he resists, or shows any signs of kicking, jerk upon the cord and say whoa! If he submits caress

him, and show him that you are not going to hurt him if he only stands still. Rub very lightly, and never use a sharp currycomb on such a horse. Some horses will not submit to the currycomb at all, unless it is an old one with the teeth nearly worn off. Use a brush mostly on a horse of this kind. If the horse is not very bad, you can break it up with the Spanish halter alone.

Halter Pulling.

A horse of this kind can never be trusted. If you leave him for a few minutes you are not sure of finding him on your return. There have been various ways adopted to cure the horse of this bad habit. One says run the halter-strap through the hole in the manger and tie to a rope, which is passed through a pulley overhead, with a weight attached to the other end; when the horse pulls, instead of breaking the halter as he expects, he only raises the weight. Another way is to pass the rope through the hole in the manger, or through the post if in the street, bring back and tie to his hind foot. Then if the horse pulls, he is only pulling his foot under him, and soon gives it up. The best way that we ever found to break up this habit is to take a strong half-inch rope, about twenty feet long, double it so that one end will be about six or seven feet longer than the other. Now pass it under the tail in place of the crupper, cross it over the back, bring down on each side and tie on the breast with a square knot, or some other knot that will not slip. You have now one end of the rope six or seven feet long. Put on your halter, take out the halter strap and put in some old rotten strap or rope, that you are sure he can break. Have it strong enough to require some effort to break it. Bring the end of the cord through the halter ring and tie to the post. Then tie the old halter-strap so as to be about a foot shorter than the cord. It wants to be just right, so that when he breaks the strap he will come back a little before he draws on the cord. When all is ready throw something in his face and make him

pull. As he comes back he breaks the strap and thinks he is loose; but finds himself brought up by the tail in a way that he did not expect. We have never known a horse to pull over two or three times in this way before giving up, and never pulling again. The worst halter puller we ever knew—so bad that he had to be tied with a log chain around his neck—was broken in this way in just three minutes by the watch and was never known to try it again.

To Make a Fast and Slow Horse Work Together.

You may have a nervous and excitable horse which you are obliged to work by the side of a slow one. Such a team is very uncomfortable to drive, and the whip has very little effect on the slow horse, while it excites the other, makes him fret, and sometimes he becomes almost unmanageable. A team of this kind should be kept in separate stables, entirely out of hearing of each other, or at least separated while you are training them. Now go to the nervous horse and commence grooming him, saying "whish!" in a soothing tone, and as you brush him off, keep saying whish! whish!! Then hitch him up single, say or use the same word to steady him down, and he soon learns that whish! means steady! quiet! Now go to "Old Pete" and take a short piece of clapboard (this will not hurt him but only frighten him,) slap him over the haunches, and say whish! in the same tone as above, or take a whip and every time you hit him say whish! until he learns that whish! means double quick. Then hitch him single and train him for a while, and every time you hit him with the whip say whish! until he has thoroughly learned that unless he starts immediately after the word he will receive punishment. We will now proceed to put the two horses together. Whish! means to the nervous one, steady, quiet! while to "Old Pete" it means get out of this as fast as possible! Horses of this kind, after such a lesson, will drive comfortably together. It will, per-

haps, be necessary to repeat this lesson for a number of times. At your option you may adopt any other word, such as steady ! hey ! etc.

Bad Biters.

Put on the Spanish halter, double loop, and chastise severely if he attempts to bite. Be on your guard and every time he attempts to bite give him a sharp blow on the nose with the fist or a stick, and at the same time yell at him in such way as to make him think you are going right through him. A few severe lessons will cure him, unless an old stallion that is confirmed in the habit, which no amount of training will break it up. Castrate or sell him at once.

Cribbing.

There has been a difference of opinion about cribbing, some calling it a habit, and others a disease. And it has always been considered incurable. There are two kinds of cribbers,—one may be called wind suckers. They will lay the nose across the manger or fence, and by sucking in air and swelling out the throat make a disagreeable noise. To cure this take a piece of old leather strap, six or eight inches long, and drive some eight ounce tacks in it, and fasten it on top of the throat latch of the bridle with a piece of twine or waxed end, and buckle just tight enough so the tacks will not prick him when he holds the head in a natural position, but when he cribs and swells out the throat the tacks prick him and he stops at once.

The other kind, which takes hold of the manger with his teeth—the biting cribbers—may be cured as follows: Take a common sewing awl and make five or six incisions in the first bar of the roof of the horse's mouth to the depth of an inch and a half. The mouth will become inflamed and remain so for three or four days.

While it is so inflamed the horse will not, or cannot crib ; and by the time the mouth gets well he will have learned that he gets hurt every time he cribs, he will be very careful how he tries it again. If an old, inveterate cribber, the lesson will have to be repeated once or twice; but this is necessary only in very bad cases.

Putting the Tongue Out of the Mouth.

Have fitted a piece of thin sheet iron, about two inches wide and four and a half inches long, with the ends made rounding, and the whole filed nice and smooth. Drill two small holes about half an inch apart near each edge at the centre. Fasten it through these holes on top of the bit with a piece of small annealed wire. Shorten the check pieces of the bridle, so that the bit is drawn well up in the mouth. This piece of iron is now over the tongue, making it impossible for the horse to get the tongue over the bit. Keep on this bit for two or three weeks, when the horse will become habituated to carrying the tongue under the bit and keeping it in his mouth. If the tongue should be put out of the mouth, though kept under the bit, take a piece of thick leather about three inches wide and five or six long, drive four ounce tacks through the lower edge and end, so that the ends will extend through about a quarter of an inch. Fasten this on the inside of the bit, with the end extending down, outside the mouth.

Now as the tongue is put out, it is pricked by the tack, and the horse will be afraid to put it out after a few trials. Any method by which the tongue can be kept from being put over the bit, or if put out under, of causing pain when put out, will break up the habit. Sometimes simply hitting the tongue at each time of putting it out, with the end of a whip will do.

The best of all, is to have a bridle with a straight bit, with two loose rings upon it. One of the rings is to come on each side of

the mouth when the bridle is on. Have a strap attached to the top of the bridle coming down over the forehead and dividing just below the eyes, and one part coming down on each side and attached to the loose rings of the bit. Buckle the strap just tight enough to keep the bit in the roof of the mouth, so that it is impossible for the horse to get his tongue over it, and the thing is done.

To Prevent a Horse from Breaking While Trotting.

Have some strong hock straps made, to buckle above and below the hock, joined in the center with a ring, one for each hock. Now put on a rope halter, and bring the stale down between the fore legs, and attach a large ring to it, just back of the girth. Or instead of the ring, have a cringle attached, such as sailors use, for a rope to pass through. Now take a small half-inch rope, tie one end into the ring in one hock strap, pass in through the ring in the halter stale, and back to the ring of the other hock strap. Tie it just right, not too tight, but so that the horse can travel easily; and as the horse trots, the rope will pass backward and forward through the ring of the halter at the girth. But just the instant he breaks his trot, and throws out both legs together, he jerks upon his nose and disconcerts him, and causes the horse to again strike a trot. After two or three lessons he is afraid to break; and the more he is pushed or excited the faster he will trot; and will not dare to gallop, for fear of again being jerked heavily at the nose by the halter. The rope passing from the hind legs through the ring, must be long enough to give the horse all the room he wants for fast trotting, or the rope will heat and break.

Getting Cast in Stall.

Drive a staple into a beam, or the floor directly over the horse's head, as he stands in the stall, to which attach a strap or piece of

small rope of sufficient length to extend to within fifteen inches of the floor. Before retiring for the night attach the other end of the cord or strap to the top of the halter, making it just long enough to allow the horse to put his nose to the floor. Being now unable to get the top of his head to the floor he is prevented from rolling, and if he is unable to roll he cannot get cast.

To Add Style.

Put on the Spanish halter, step in front, holding the cord in the right hand, give a slight pull. The horse will usually throw the head up, as the effect of the restraint is back and upwards, but if the nose is given back toward the breast, reverse the pull by throwing the hand up. Repeat this until the head is thrown up promptly to the least pull, either on the cord or halter.

By making this lesson thorough, the horse can be so fixed in the habit of throwing the head up, by being pulled upon, that while driving, the head can be thrown up at will, by giving a short pull on the reins.

Throwing the head up gracefully, when pulled upon with the reins or by the halter, is a part of the object of bitting.

If the nose is thrown out, pull down and back steadily, but firmly. As the horse yields give loose and caress, repeating until the mouth is given back promptly. In driving to harness have the martingales a little short, using them so until the mouth is submitted to restraint easily and naturally. Now gradually add more style, by pulling on the reins a little, and repeating as the head is lowered in the least, until it is not only brought up, but back as required. If not successful in this, put on the bridle as before, and work up with it until successful, then gradually, while driving, bring the head up with the control of the reins.

If your horse carries his head too low, or has too much curve to the neck, as is sometimes the case, until the head is almost

upon the breast, have a bridle made with overdraw checks, which are light straps running from the bit over the head. This bridle is made with loops or open places on the top of the head for the overdraws to pass through, bring them back and attach to the regular checks with a buckle, the same as you would attach the inside line of the double harness. Now, by tightening up the overdraw you can bring his nose out into any desired position. If you have a team that does not carry their heads alike, put on a pair of bridles, made as above, and by adjusting the overdraws you can bring their heads into exactly the same positions, which is very desirable for a fancy team.

Hints on the Bringing Up and Management of Horses.

FIRST. Never allow your men or boys to leave up a couple of bars when you turn out your horse to pasture, for by so doing you will give them the first lessons in jumping. You want to avoid everything that will in any way give your horse the first lesson in forming a bad habit.

SECOND. Never allow yourself, or any one else, in turning your horses into pasture, to hit them with the halter, strike with a whip, or make any motion as if you wanted them to get out of your way. A few lessons of this kind will make your horse bad to catch in pasture, which is very annoying and a great trial to your patience. Always treat your horse as if you liked to have him close at your side, and he will love to be there.

THIRD. Always reward your horse for doing right. Never speak short or cross to him unless it is to force obedience. The more kindly and gently you act to your horses, the more they will like you, and the harder they will try to please and obey you.

FOURTH. Never work or drive a horse until he loses his courage. If you do, you spoil him forever. For instance, a farmer had a span of very large fine colts. He had broken them to work well by the side of other horses, but had never tried to hitch either of

them single. So one hot day in July, having worked them *double* all day in the harvest field until they were wet with sweat and their strength almost used up, said he : " While these colts are so tired, it will be a good time to break them to single harness." Although remonstrated with by his hired man, he insisted on hitching the largest and best one into a buggy, and drove him without rest, sixteen miles on a hot July night. When the colt came back he was so completely exhausted that he staggered from side to side, and could scarcely get into the barn. The farmer thought he had done wonders and broken his best colt to go in single harness. When the next morning came, he hitched him up again to the buggy, but the colt would not stir a step, and would never afterwards work in *single harness*, and was one of the worst balkers in the country. The other one, after a good night's rest, was hitched up by the hired man to a buggy, and after a short time worked as well single as double, and was a true and kind horse ever after. While the one that had his courage all broken down was never good for anything. You cannot be too careful on this point if you want a true and faithful team.

FIFTH. Always be careful in using the currycomb, and don't dig in as you would with a hoe among weeds. Your horses, many of them, have thin skins and are very ticklish, so that they will not bear the currycomb unless used very gently, and particularly about the legs. For such an animal, wash the legs with soft water and soap, and then rub dry with straw, and you will have no trouble, and your horse's limbs will get stronger every day.

SIXTH. If you want your horse to last long, do not check him too high. Give him the free use of his head and neck. Just think how you would feel to work all day with a straight jacket laced up tight around you.

SEVENTH. A manger should never be higher than the knees. Many a fine horse has been knee sprung and become a cribber by feeding in a high manger.

EIGHTH. Nevertake a colt or a horse to a blacksmith to be shod until you have first handled his feet yourself and convinced him that he is not going to be hurt. Many a fine colt has become a confirmed kicker by mismanagement in the blacksmith's shop.

Match horses with reference to size and motion particularly; to to color if you can and have the other requisites.

In going up hill stop your horse frequently and let him take breath, particularly at the top.

Never let a horse stand facing a cold wind, particularly if he is warm. Many persons will drive until the horse is all in a perspiration, and then if a light blanket is thrown losely over him, they think they have done all that is required. The breast, which is the most sensitive part, is left unprotected.

Use but a few words with a horse, but have them understood; and never say whoa! to a horse unless you want him to stop; the same with all other words of command. If a horse learns that a word means anything, or nothing at all, he is only confused and never knows what is required of him.

Be always prompt and earnest, but not harsh; and be sure that the horse fully comprehends what is required of him.

Allways encourage and caress your horse for doing right; and punish only for doing wrong.

Win the confidence of your horse by kindness. Let him feel that you are his best friend, and he will soon associate with your presence a feeling of protection and security; and his service becomes a pleasure instead of being a burden.

If a horse is running away, it is always safer to remain in the wagon than to jump from it.

If your horse is warm, give him but little water, unless he is to be moved.

If your horse is sick use common sense and reason. Don't bleed and blister him or pour down such medicine as every ignorant bystander may recommend.

There is more horses killed by the injudicious use of medicine than there is benefitted by it.

If you don't know what the trouble is, put him in a clean, quiet, well-ventilated stall, give him good nursing and leave the rest to nature. It is better to let him die a natural death than to murder him with poisonous drugs.

Shoes should be reset once in from four to six weeks. Don't allow the smith to pair away the heels any more than is necessary to give a level bearing, and on no consideration allow him to apply a hot shoe to the foot. The nails should be small and driven well forward. Never allow the smith to wrench off the shoes without first raising the clinches.

The foot should always be well pared at the toe and the shoe set well out under the edge of the hoof at the toe, so as to get the full bearing of the crust upon the shoe.

Don't whip your horse for shying, or being afraid of any object in the road. That only conveys to his mind an idea that you are afraid of it too, and wish him to get away from it as fast as possible.

Never pat and caress your horse when he is doing wrong. Many horses have been made baulkers in that way. They have also been made bad to shoe. The first time the horse is shod, if he kicked the smith, the owner has stood at his head and caressed him, as much as to say that is right, kick him again. A good many horses have become confirmed in various bad habits in the same way.

A horse is said to be of age at five years old, when he is supposed to have attained his full strength. Previous to that time the horse is called a colt, and the mare a filly. They should never be put to severe labor under five years of age.

A young horse should never be left to stand in the street without hitching, or an old one, if he is at all nervous or excitable.

If your horse should commence to kick from any cause, while you are driving, don't throw away the reins and jump out of the

wagon, but give him short, sudden, raking jerks upon the bit to attract his attention to the head, you thus take it away from his heels.

If your horse becomes unmanageable and runs away, keep a firm hold upon the reins and endeavor to keep him in the middle of the road.

Never allow yourself to get angry at your horse, no matter what he may do to you.

Never go near a bad horse if you are afraid of him, he will know it and take advantage of it before you acknowledge it yourself.

Never undertake anything with your horse unless you are sure you have the ability to carry it out.

Have your stable light and well ventilated, and never leave a pile of fermenting manure in or about the stable, affecting the health of your horse by their unwholesome vapors.

Remember a good grooming is better for your horse than extra feed.

Feed regular; and if your horse has to perform an extra day's work, don't give him an extra feed just before starting. If given at all let it be the night before.

Keep the stable clean, and don't stow the bedding under the manger to act as a noxious smelling-bottle to the horse's nostrils.

Keep your horses feet clean by frequent washings and don't pack them with cow-dung or other filth, as they possess no value except the moisture they contain.

Remember the frog of the foot acts, not only as a spring, but as a sponge to take up moisture to keep the foot in a healthy state. If they become dry and hard from standing on a dry floor, bind a wet sponge upon them, or several thicknesses of wet cloths.

Give less long oats and more short ones. Team horses generally get too much whipping and too little care and attention. If a horse slips or stumbles he gets whipped for it. If the driver loses his hat he whips his team to pay for it. If he runs into another wagon through his own carelessness he whips his horses

to make it all right. If he gets angry or out of patience from any cause whatever, he vents his spite on his team.

Always speak to your horse in a natural voice. The pulse of a nervous horse may be increased from ten to fifteen beats in a minute by a single harsh word.

Bad to Catch in Pasture.

This is one of the most provoking and annoying of all the bad habits of the horse, and one that is the result of bad management when he was young. If you will always fondle and caress your colts and young horses, and instead of driving them from you, will frequently feed them something they like from your hand, and not allow them to be stopped with the halter, or frightened in any way when they are turned out, they will never be bad to catch. But you have one that has learned this bad habit, and now you want to break him of it. Put on your Spanish halter and work him up sharply, first right and then left, (if he is very stubborn put it on double,) until he will come to you at the word and follow like a dog. Now you want to learn him that you can control him at a distance as well as close at hand. To do this have on the Spanish halter (single) and tie with a single bow knot that will slip out easily, the same as described in biting the colt. Now tie two or three hairs of the main together, (after having first rubbed on a little shoemaker's wax to keep the knot from slipping,) just enough to hold the weight of the cord. Also a few tail hairs in the same way. Pass the end of the halter through these to keep the cord on the horse's back, and tie to it a long cord, so as to have it eighty or one hundred feet long, dragging behind. You now leave your horse in the pasture feeding quietly for a few minutes; you will then go out and walk carelessly about, as if you were doing something else, until you can get hold of the end of the cord. Now approach him with your halter in your hand, and if he is bad to catch he will start away. Grasp

the cord firmly, and when he gets the length of the rope, say *come here!* at the same time giving him a jerk, which will convince him that he is still in your power ; when he comes to you caress him kindly and fed him something that he likes, such as grain of any kind, or apples, or salt and sugar, mixed in equal proportions, is the best of all. Now fix the cord the same as before and in a few moments repeat the lesson, and in a short time he will come to you at the word from any part of the field. If you choose, you may substitute any other word, or perhaps a whistle is best of all. It is not the dread of work that makes horses bad to catch, (as most people suppose) but it is the fear of punishment, that he has learned by experience, he frequently gets as soon as you get your hands upon him. Always treat your horse kindly, and whenever you have occasion to go through the pasture call him to you and feed him something out of your hand, and you will have no trouble in catching him ; he will come at the call, even if it is in the middle of the night.

Jumping in the Pasture.

There are several ways to prevent horses from jumping in the pasture. The first is to have good fences. When a horse has once learned by experience that he can get over a poor fence, it takes but little practice to perfect him in the art of jumping so that no ordinary fence will stop him. A very good hobble may be made as follows : Put on a surcingle that has two rings attached, one opposite each fore leg; then take two straps made something like a hame strap, only longer; light breast straps will do. Pass one round the arm of each leg, put the end through the keep and draw it rather snug. Now put the end through the ring of the surcingle and buckle it tight enough so that when he walks he can only bring his legs forward in a perpendicular line. Of course he cannot throw them forward to jump. In some instances it may be necessary to put on the hock straps, and tie a strap

from the hocks to the rings of the surcingle just long enough for him to walk by taking short steps. He cannot jump with this on and will soon forget the habit. Another way is to tie his ears together. To do this you will take a shoemaker's punch and make a small hole near the end of each ear. When it is well tie the ears together with a soft string, when you turn him out in the pasture. A horse will never jump unless he can put his ears forward. The hole is so small that the hair covers them and is not seen. We have known some of the worst jumpers in the country entirely cured of the habit in this way; also, sheep and cows may be cured of jumping in this way. For cows tie the ears to the opposite horn.

Another.—Have a good five-ring halter and attach a brow band; or, take an old head-stall without bit; stitch a piece of sheep skin with the wool side in to the brow-band. Have it long enough to reach within five or six inches of the nostrils, then split it in front about half or two-thirds of the way from the bottom edge to the eyes, then bring the corners down on each side and tie to the cheek pieces of the halter. Clip all the wool off from the sheep-skin directly over and about the eyes. With this on, the horse can see down, back and sideways, but not in front. Of course he can't jump. This will keep colts from running in the pasture and biting and worrying the team horses.

Bad to Shoe.

Put on the double Spanish halter and proceed to handle his feet with the cord in your hand. If he resists punish him at the mouth with the halter, and when he submits caress him. If this does not control him, tie his head and tail together and whirl him as described on page 41; then put on the Spanish halter as above. If he is very bad, and does not yield to this treatment, proceed to give him a regular course of handling as described in "*Subduing the Horse;*" and handle his feet while down until he is con-

vinced that you are not going to hurt him. Then put on the cord as above and you will have no trouble.

Bad to Bridle.

This habit has been brought about by bad management in the first place. The colt was a little awkward about taking in the bits before he knew what was wanted of him; they having been forced and jerked up into his mouth in such a rough, harsh way as to make him afraid to take them in at all. A little kindness and patience in the first place would have prevented the difficulty. Having once learned the habit it is hard to break it up. We would give such an animal a regular course of treatment as described in "Subduing the Horse." Then take the bridle and put it on and take it off while he is down, and rub and fondle him about the head and ears until he will submit to having his head handled. Then take some salt and sugar mixed in equal proportions and let him eat it from the hand; at the same time put the bits carefully in his mouth. Then caress and feed him more salt and sugar from the hand held rather low. At the same time take the bridle off and put it on again, and rub and caress him about the head and ears. He will soon learn that he is not going to be hurt, and he will hold down his head and take the bits without difficulty. For a few days unbuckle the bits before putting on the bridle, put the bridle over the head, then put the bits carefully in the mouth. A few days of careful handling in this way will radically cure the habit. But harsh treatment is sure to make it worse.

Biting the Blanket or Halter.

Some horses will bite their blankets and tear them off. This is frequently the case with stallions. Others will bite and untie

their halter. To cure this habit take some paste and put upon the blanket or halter where they bite it, and sift upon it a good supply of cayenne pepper. He will quit after getting one or two tastes of the pepper.

Switching and Hugging the Line Under His Tail.

Some horses have a kind of habit of switching which is natural to them; the same as some men have a habit of winking the eyes. But the habit is usually caused by a ticklishness about the tail. To cure this take an old harness or surcingle with a crupper, wrap old rags or a piece of an old blanket about the crupper until it is three or four inches in diameter; put this upon him and let it remain on all night; of course he will hug the tail down at first. But he is just like a man grasping a rope or a stick and holding it with all his might. In a little while the muscles become tired, and he is glad to let go, so with the horse. The next day if he gets his tail over the line, instead of hugging it he will lift it and let the line loose. If he is a swicher, hang a lot of straps on and about the crupper, in such a way as to dangle all about his tail. Now every time he switches he is knocking the straps one side and the other, and is all the time taking the ticklishness out of himself, and is glad to stand still. Some of the worst horses of this kind that we ever knew have been cured of the habit in one or two nights with this treatment.

Hard Bitted Horses.

For a horse of this kind we would put on the double joint bit and get a good whoa ! on him. Then don't use the word whoa ! to steady him down with, but use steady, or some other word, and never say whoa ! unless you want him to stop. A horse of this kind has learned to bear upon the bit, and the harder you pull

upon the reins the harder he bears, and the faster he goes. Take him on a smooth road and let him have the bit gradually at first, and steady him down with the word. If you don't pull upon the reins he has nothing to bear against and is disconcerted. We have known some of the worst pullers come down upon a walk with a few moments of this treatment. If you have a good whoa ! on him, there will be no danger of his running away. If he goes too fast set him back with a jerk, and then give him the reins again, and steady him down with the word, and he will soon learn to draw the buggy with the tugs instead of the reins.

TEACHING TRICKS.

As many of our scholars may wish to know how to teach their horses tricks, we will explain how it may be done. Teaching a young horse a few tricks greatly serves to keep up an interest in him, and makes him appear intelligent, fearless and affectionate. In teaching your horse to perform tricks it is necessary to first force him to do what you wish and then caress him kindly for doing it, and reward by feeding him something that he likes. In teaching your horse to perform tricks, it is best to give him lessons of half or three-quarters of an hour each, daily.

To Come at the Crack of the Whip, or at the Word of Command.

See "To make a colt follow under the whip," page 23.

To Make a Bow.

Take a pin in your right hand, between the thumb and forefinger, and stand before, but a little to the left of your horse. Then

prick him on the breast or on the back about where the surcingle would naturally come (we prefer the back), very lightly, as if a fly was biting, which, to relieve, he will bring down his head, which you will accept as yes, and for which you will reward him by caressing and feeding him a little apple, a few kernels of corn or oats. Then repeat and so continue until he brings down the head the moment he sees the least movement of your hand toward his breast or back; or substitute some signal which he will readily understand.

To Say No.

Stand by your horse near the shoulder, holding the same pin in your hand, with which prick him lightly on the back of the neck, and to relieve himself he will shake his head. You then caress him as before, and so repeating, until he will shake his head at the least indication of your touching him with the pin. You can train your horse so nicely in this way, in a short time, as to cause him to shake his head, or bow by merely turning the hand a little, or moving it slightly toward him.

To Lie Down.

To teach a horse how to do this trick quickly, you must lay him down two or three times, or as often as you will find it necessary to make him understand your object. If an old horse, strap the near fore leg up to the arm, then take your little strap, previously used to tamper your colt with, and place over the back and strap around the off fore foot, below the fetlock. Then take the bridle rein firmly in your left hand, about eighteen inches from the head, and pull upon it a little toward you; the moment he steps, pull upon the strap over the body, which will bring the horse to his knees. Hold him quietly, at the same time talking to him gently. When he springs, pull sharply with the left hand, and at the same in-

stant pull down with the right, which will swing him around you, and prevent his rising high enough to injure his knees by the momentum of the body coming down. By being gentle the horse will usually lie down in a short time. When down treat your horse with greatest attention and kindness. After holding him down, ten or fifteen minutes, permit him to get up. Repeat this lesson until he will come down readily. Then use only the strap over his back, which have on the near foot, and bring him on his knees gently, when he will soon lie down. When he will come down on his knees readily by taking up the foot in this way, take up the foot with the hand, asking him to lie down. He will soon come down. When he will come down on his knees readily by taking up the foot with the hand, simply stoop as if intending to take it up, saying "lie down, sir." Then make him come down by a motion of the hand, and finally by telling him to lie down. If a colt, use but a single strap over the body at first, which will cause him to come on his knees. In teaching a horse to lie down, be gentle, caress and reward him for lying down, and your horse comprehending what you want, and finding himself paid for compliance, will soon be as anxious to get down for the reward as you are to have him.

To Paw With His Fore Feet.

Take a pin and prick him lightly on the arm of the fore leg. He will soon learn to paw to get rid of the prick, and then he will paw when you stoop as if to prick him. It is very easy to teach a horse this trick, which gives him the appearance of having more intelligence than almost any other; for he will continue to paw as long as you stoop towards his leg, and when you straighten up he will stop. Thus you can make him tell his age, count, do examples in arithmetic, etc.

To Walk on His Hind Feet.

Put on the Spanish halter and stand directly in front of him, and by slight jerks, and by touching him on the nose with the whip make him raise up on his hind feet.

To Waltz.

Put on a surcingle and bring the head round to one side which will cause him to go around in circles. At the same time say "waltz!" He will soon learn to go round at the word without having his head tied.

To Sit Up.

When your horse will lie down readily, you can then easily teach him to sit up like a dog. If young, and not very heavy and strong, you can easily prevent his getting up without tying down. First, cause him to lie down, having on him a common bridle, with the reins over the neck; then step behind him, and place the right foot firmly upon the tail, the reins in your hands. Then say "get up, sir." The horse, rising from a recumbent position, first upon his belly, throws out his forward feet, and raises himself upon them, springs forward, and raises on his hind feet. Now, standing upon his tail firmly, and pulling back upon the reins when he attempts to spring forward and up, will prevent him from doing so, and you hold him sitting up. Hold him firmly a few seconds, talking to him kindly and caress, before permitting him to rise on his feet. Repeat a few times, when, instead of springing up, he will sit on his haunches a short time, which you are to accept as complying with your wishes. Always say "sit up sir," every time, and hold him in the position as long as he will bear, fondling him, and feeding him from the hand with something he likes, and your horse will learn to sit up for you as long as you please.

But if your horse is heavy and strong, it will be necessary to resort to other means to hold him down at first. This you can do by putting on his neck a common collar, and causing him to lie down. Then fasten a piece of rope, or a rein, to each hind foot, and bring forward through the collar, and bring up close, which will bring the hind feet well forward. Then step behind, as before, and when he attempts to rise on his hind feet, he finds it impossible to do so, because you hold them firmly with those straps. Repeat two or three times, when it will not be necessary to resort to such force.

To Bore a Hole With His Forward Feet.

Tie his forward feet or hold them still with the hand and make him go round with the hind feet, which twist his forward legs, and give them the appearance of an auger boring a hole.

To Get Upon a Box.

Put one foot on the box and make him step the other up, and he will soon step up himself. And then it is very easy to make him step round with the hind feet, keeping the fore feet on the box. To learn him to get on the box with all four feet takes a good deal of time and patience. But it is like all the rest; first force him to do it, and then caress and reward him for it.

To Teach a Horse to Kiss You.

Teach him first to take an apple out of your hand. Then gradually raise the hand nearer the mouth, at each repetition, until you require him to take it from your mouth, holding it with the hand, telling him at the same time to kiss you. He will soon learn to reach up his nose to your mouth, first to get the apple, but finally because commanded to do so. Simply repeat until your horse understands the trick thoroughly.

To Shake Hands.

Tie a short strap, or piece of cord, to the forward foot, below the fetlock. Stand directly before the horse, holding the end of this strap or cord in your hand, then say, "shake hanks, sir;" and immediately after commanding him to do so, pull upon the strap, which will bring his foot forward, and which you are to accept as shaking hanks, thanking him for it by caressing and feeding. And so repeat, until when you make the demand, he will bring the foot forward in anticipation of having it pulled up. This is a very easy trick to teach a horse. By a little practice, a horse may be easily trained to approach, make a bow, shake hands, and follow like a dog, lie down, sit up, and the like, which make him appear both polite and intelligent.

Never lose courage, or confidence in your ability because you may not bring about good results easily. To accomplish anything of importance, remember requires no ordinary resolution and perseverance. There would be no credit or importance attached to mastering and managing bad horses, if not difficult, and apparently dangerous. No duty requires more firmness of purpose in the control of the passions, or more fidelity to the principles of firmness and truth, than that of horsemanship.

If you would really be a successful horseman, you must never seem to forget, by your conduct, that you are a man, and that your real superiority over the animal really consists in the prudent exercise of your reasoning powers. Brute force is not your forte, and the moment you give way to passion your reason must yield to the control of blind instinct, and you at once abdicate your intellectual superiority over the animal. Try to prove, by the example of your action in the performance of the duty, that to be a good horseman requires higher qualifications of fitness than that of the huckstering dishonesty and depravity, so generally evinced in the conduct of those claiming the distinction.

HOW TO TELL A HORSE'S AGE BY THE TEETH.

According to Dadd, Zenatt, and several other authorities.

At two years old the colt sheds the two front nippers and the permanent ones have taken their places, with their deep pits in the center, and uneven edges.

At three years, the two permanent, middle, or adjoining teeth are seen.

At four years, the permanent corner teeth appear, and the tusks will begin to show.

At five years, the corner teeth are well up, the front nippers somewhat worn, and the tusks fully developed.

At six years, the black marks have disappeared from the two front teeth, leaving a brown mark in its place.

At seven years, the black marks have disappeared from the center nippers, leaving a brown mark.

At eight years, the black marks are gone from all the nippers in the lower jaw. They may remain in the upper teeth somewhat longer, but the marks are now said to be gone from the horse's mouth. The corner nippers are sometimes burned with a hot iron to give them seven year old marks. After this there is no accuracy in telling the age, but may be guessed at from general appearance.

At nine, the front nippers begin to assume a roundish appearance, and the cups are gone from the front nippers above.

At ten years, the center nippers begin to assume a roundish appearance, and the cups leave the center nippers above.

At eleven years, the nippers all have a roundish appearance, and the cups have left all the nippers above.

At twelve or thirteen years, the corner nippers begin to assume a triangular appearance.

At seventeen years, the nippers all have a triangular appearance.

At eighteen, they gradually assume an oval appearance which is completed at the age of twenty-one. The teeth then all have

an oval appearance, but in a reversed direction, from outward to inward. There are also other signs by which a person can form some idea of the horse's age. As the animal increases in years the upper corner teeth become indented or notched. Some idea may also be formed from the inclination of the lower teeth. At eight years of age the teeth are nearly upright, but they gradually assume a horizontal position, until, at the age of twenty-one, they stand nearly straight out. They also gradually grow long, and assume a yellowish appearance. There is no certainty in determining the exact age of an old horse. But a good judge, who takes into consideration all the appearances, the marks, and points, and the inclination of the teeth, will not be apt to make any very great mistakes.

TRAINING CATTLE.

Breaking Steers.

In breaking steers, as in horses, patience and perseverance are necessary to success. And the same general rules will apply in both cases. First gain the confidence of your animal by kindness mingled with firmness. Let him understand that your will is law, and must be obeyed. Teach him carefully what you want him to do, and be sure that he fully comprehends what is required of him. Always reward him for doing right, and punish only for doing wrong. And whatever he does, never, under any circumstances, allow yourself to become angry or lose your patience. Treat him kindly and show him that you are his friend, and he will not only be willing, but anxious to serve you.

The first thing to do in breaking steers is to get one of them into a barn, or small yard with a high, strong fence, so that he cannot get away from you, and be sure that you are entirely alone with the steer. Then prepare yourself with a good whip, with the stock five or six feet long, and a leather lash, perhaps two feet long. Then approach him slowly with your whip in your hand. If he runs from you, just walk slowly after him. Don't be in a hurry, but keep following him up until he becomes accustomed to your presence, and is satisfied that you are not going to harm him. (If he is very wild it may take an hour or more.) When he will allow you to approach him, scratch and rub him lightly with the end of your whip-stock; he will soon allow you to rub and pat him with the hand. Gentle and caress him for awhile; then take your whip and touch him lightly on the off side off the

neck, just back of the ear and say, Haw! When he moves his head a little towards you, stop and caress him kindly. If he runs from you, don't try to stop, but just follow him up. When you can approach him touch him again on the off side, and say, Haw! He will soon learn to come round at the word. If he is very bad, put a surcingle around him rather loosely; now take a hame strap and gently buckle it round his near fore foot; attach a small rope to it, which should be long enough to reach half way across the yard; pass the rope over the surcingle and take the end in your hand; if he attempts to run from you, pull upon the rope, which will at once put him upon three legs; at the same time hit him lightly over the head, and say, Whoa! Be sure and caress him for each act of obedience. He will soon learn stop and haw at the word. Now take off the surcingle, strap, etc., and turn him out. Take his mate and give him the same kind of a training. By this time the first one is cool and rested, and ready for another lesson. Repeat the first lesson with the whip, then touch him lightly with the whip on the near side of the neck, just back of the ear, and say, Gee! until he will step round from you; then stop and caress. Repeat until he will haw and gee readily at the word. Do the same with his mate. This is perhaps as much as it would be best to do in one day; but if you wish you may go right on with the training. Take the first one into the yard. Take him near the fence or wall, and standing by his side, hit him lightly over the head and say, Back! When he steps back stop, and caress. Repeat until he will go back at at the word. Now give the other steer the same lesson. You now want them to come to you by the word Here! Take one at a time, as before; stand a little in front of him, and hit him lightly behind, and say, Here! When he obeys, caress, until he will come at the word. If you choose, you may put on the Spanish halter, and fetch him to the right and left, the same as you would to halter-break a colt. Your steers have now learned Whoa, Haw, Gee, Back, and Here. Now take them both into the yard and practice them together. Bring them together side by side, the same

as if yoked. Now hit the off one lightly on the neck on the off side, and at the same hit him behind, which will cause him to go forward and haw round. Make him take an entire circle round the near one, and come back into his place. Now do the same with the near one; hit him lightly on the near side of the neck, and touch him behind; gee him round the off one and make him come back to his place. If you chose you may now reverse them and put the near one on the off side, and go through the same training. By this time the steers have learned to put confidence in you, and you may take them out into the open yard, or street, if you choose, and go through the same performance.

The next step will be to accustom the steers to the yoke. Take one at a time into the yard, and place the yoke upon his neck, moving it gently backward and forward, and sideways, until he becomes accustomed to it; then take the bow and do the same with that. Now put the yoke upon his neck, put in the bow, and fasten it with the key. If he becomes frightened, as is sometimes the case, and whirls, keep out of the way so as not to get hit with the end of the yoke as it comes round. He will soon become satisfied that he is not going to be hurt, and stop. Now go to him and take hold of the end of the yoke and shake it lightly, at first; if he stands still caress him; then shake it about harder, as he will bear it, being careful always to caress when he submits, until he will allow you to throw it over his neck and back, and shake it about as much as you please. Give the other one the same lesson. Now go across the yard and, holding up the yoke, say, come here. He will come by the word Here! and will soon learn to walk under the yoke at the word. Do the same with the other, always remembering to caress for every act of obedience. You are now prepared to yoke both steers together. Let them walk about a short time to become accustomed to the constraint of the yoke, and to learn to move together. Now hook a chain into the ring of the yoke and rattle it about, and make it jingle, until they become used to it. Then take hold of the end of the chain, which should be long enough to place you beyond

the reach of their heels; now swing it lightly against their legs, and if they show any disposition to kick, keep swinging it against their legs as long as they kick. You now want to learn them to draw. Hitch a pole, or two or three rails, to the chain, and increase as they will bear it. Now accustom them to the sled-tongue, and load light at first, increasing as they will bear it. Be careful always to speak kindly, and caress for doing right. If your steers have learned to run away (which will not be very likely if broken by the above process), put a strap with a rope attached round the fore leg of each, bringing the rope back into the sleigh or wagon. If they attempt to run you can bring them upon three legs; at the same time, hit them sharply over the head, and say, Whoa!

Kicking Cows.

It is natural for the cow to stand while being milked; consequently the heifer knows nothing about kicking until hurt or frightened into it. The lesson in regard to heifers is therefore perfectly plain. Be careful and not hurt or frighten them. If by accident you should, and they kick, do not punish them for it. Kindness and gentle handling is the only remedy. If your cow kicks, let your reasoning for the cause be based upon the principle that she never kicked until she was injured, and the remedy will at once suggest itself. No cow was ever broken of kicking by striking with the stool or other weapon. This practice only puts the cow on her guard, and as you come near her with the stool she uses nature's defense, and kicks. Handle her gently. If she walks off or kicks, pay no attention to it, using no loud words or blows. If her teats are sore, she is quite liable to do either; and you must have patience until they are healed. In our experience, we have never found a confirmed kicker in a yard where kindness was a characteristic of the family who handled the dairy; on the

contrary, we have found plenty of them were quarreling, loud words, and general bad temper prevailed.

If the cow has become a confirmed kicker, put on the Spanish halter, and halter-break her the same as directed for halter-breaking colts. It is a good plan to halter-break every heifer, when they are young. For the, kicker put on the Spanish halter and hold it in your hand, or let an attendant hold it while you are milking, and every time she attempts to kick, jerk upon the cord, and she will associate the punishment at the mouth with the kicking. She will be afraid to kick, and the habit is cured. Be sure to caress and talk kind and gently to her when she submits.

Milking.

Dadd says : " Give the cow some kind of food just before you commence to milk, as the process of mastication will take her attention from the milker's operation, and she will not hold up the milk." " The teats should be washed with warm water in winter and cold water in summer, to remove the dirt which would otherwise fall into the pail." " A merciful man, or, what is better, a kind-hearted woman, make the best milkers." " The cow's teats, especially while young, are sometimes excessively tender, and the hard tugging and squeezing which many poor sensitive creatures have to endure at the hands of some thoughtless, hard-fisted men, are truly distressing to witness." " The milker should not sit off at a distance, like a coward, but his left arm should be in close contact with the leg of the cow, so that she cannot kick ; if she makes the attempt he will only get a push instead of a blow." The milking should be done in the quickest, possible time, and the cow should be milked clean and dry, otherwise the cow will be ruined as a milker, besides losing the richest and most valuable part of the milk. The indolent person, " slow coach," on the one hand, or the " Mr. Hurry-up," on the other, who cannot spend time to attend to the stripplings, should never be allowed to go near a cow.

TRAINING DOGS.

From A. H. Rockwell's New Work.

The dog is the most domestic and intelligent of all animals. He is easy to teach, and, if properly used, is a faithful and willing servant of man ; if abused and ill-treated he is quite apt to be disagreeable and a nuisance. The dog being so closely a companion of mankind, it becomes a duty to educate him in such a manner that he will reflect credit upon his master, and be an agreeable inmate of the household as well as a useful assistant. We have given much attention to this subject, it being one which cannot fail to interest those who give it thoughtful application. We have had two of the best trained dogs probably ever known in this country, and at the present writing have a greyhound which understands to obey thirty-two different words, and we always found a pleasure in teaching them. The rules whereby any one who will be patient, kind and persevering can educate dogs to be useful as well as to perform pleasing tricks, are easily understood. We give a few, sufficient to lead the operator to the practice of many more. There are of course as many different traits and dispositions of dogs as there are different breeds, and judgment will be required in teaching the dog to train him to that to which he is best adapted by nature. For instance, a Terrier will catch rats, while a Setter will scent birds without training ; the St. Bernard is a faithful watchman, and the Greyhound takes to running from his birth. These *natural* traits it is necessary to have in mind in attempting to teach the dog, being careful in not urging upon him the performance of any duties or tricks which

are manifestly not in his nature to do. In selecting dogs for any particular lesson, study his subject closely. As probably the most useful lesson to be taught, we commence with

Training the Shepherd to Drive.

Take a well-bred Shepherd dog, about six months old, reared in some secluded place, hearing no words with a meaning intended to be attached, except his name. He should know nothing of the ordinary words in use towards dogs, and not have been handled by boys or careless persons. Take him alone with you in a large room. The first thing to be done is to teach him to lead ; placing a strap around his neck that can not hurt him, to which attach a cord six or eight feet in length ; stand still and hold upon the cord for a few minutes, until he ceases struggling to get away. It is best to give one lesson each day during the whole training. The first two lessons should be devoted to teaching him that he can not get away. Now commence teaching him to come to you by pulling upon the rope and saying, "*Here!*" using only the *one word*.

In the use of this as well as all other words used in teaching the dog, *one word* is all that is best to try and teach him for any *one act*, it being so difficult to make him understand if you attempt to teach him more. When he is once fixed in the habit of minding the word, you may then use such other words in connection therewith as are pleasant to the ear, as, for instance, "*Come here, sir!*" Without the word *here* he will not know what you mean, and the others being meaningless to him, do not puzzle him. He will also be less liable to have too many masters, as the *one word* will not be likely to be used every time by a person unacquainted with your mode of training. Of course, if you prefer it, you may, in giving the lesson, substitute other words for those laid down ; but we give those which are the readiest to the tongue.

As the dog comes up, whether voluntarily or not, say "*Do!*"

and caress him. A lesson of an hour or two, working slowly and patiently, will be about right each time. Proceed with it until he will come to you from any portion of the room at the word "*here*." He will have learned by this time, probably, that the word "*do*" is for him to understand that you are through with him. When he perfectly realizes this, you may then prefix words, and say, "That will *do*," emphasizing upon the word *do* each time. You may also now say, "Come *here*!" remembering that the words *here* and *do* are the only ones he obeys. He can not connect words to form sentences, or be made to understand them when thus connected.

You now wish to teach him the words "*go*" and "*halt*." To do this, you will place yourself in a position of the room opposite to where the dog would naturally desire to go, (for instance, the door, or something which would attract him, such as food,) say "*Go!*" and by coaxing and urging him, start him along ; as he gets part of the way, say "*Halt!*" pull upon the string, stopping him, and say "*Halt!*" again. Proceed with this until he has learned to obey both the words "*go*" and "*halt*." To teach these four words named will generally take three or four weeks. Now teach him to bark at the word "*speak*," by holding up something which he wants very much, for instance, food when he is quite hungry. You may now let him loose and let him run about with you, (*previously* keeping him confined, but not in a narrow place,) being watchful that he does not stray off, nor be hurt or handled by others. He will soon become handy about the house. You having control of him through the words you have taught him you can keep him in his place by word of command. For instance, if you wish him to go out of doors, show him the door and say "*go out!*" The word "*go*" will start him, and in a little while he will become familiar with the word "*out*." Let him have a fixed place to sleep, and teach him its name. If you have a dog already trained to drive and *go behind*, take him out with him to drive in the cattle. He will thus learn that they will run from him. Say nothing to him while he is with the other dog,

unless he attempts to go to the *head* of any of the cattle. This you must not allow. After two or three times take him out without the other dog, and allow him to run after the cattle, provided the cattle are used to being driven by dogs. It will not do to let him run where there is a chance of his being turned upon. If he runs them too fast, say "*steady!*!" He will not know what you mean, but as you use words with him only when they mean *something*, he will be apt to pay attention and go slower; if he does not, say "*halt!*" then "*go!*" steadyng him by the word "*steady!*" if possible. He will gradually learn its meaning by its repetition. If you have no other dog, you will let him go without, being more watchful of him that he does not go to the head of the cattle. Otherwise say nothing to him except "*go!*" not letting him start until he gets the word. After a while you may proceed to practice upon the other words he knows. If he shows no disposition to bite at the heels, or pull at the tail, take a rope and tie a knot a short distance up, fringe out the end, and play with him with the rope, letting him catch hold of it, and cause him to bark at it by using the word "*speak.*" When he takes hold of the rope say "*up,*" and when you wish him to let go, "*do.*" You may then with a slow cow, call him up, and, taking hold of the tail, say "*up,*" and "*speak,*" to teach him to take hold of the tail and bark, when you say "*start 'em up,*" and "*speak to them,*" and to let go when you say "*that will do.*" Now accustom him to the word "*Fetch*" for sheep, and "*Get*" for cattle, etc.; so that when you say, "*Go and get the cattle!*" he knows you mean cattle, instead of sheep or horses. You may now teach him to know the right from the left, and to obey your orders in that respect, by taking him into a large room, and by the motion of your right hand try to have him go to the right from you, saying, "*Go*"—"*Right!*" If he does not do it, say, "*Halt!*" and repeat. When he does do it, say, "*That will do!*" Continue this until he will go to the right at the motion of your hand and the word "*Right;*" then

with your left hand making motions, and the word "Left," you teach him the opposite. By these motions and an appeal to the intelligence of the dog by your countenance and eyes, you can start him for the fields in any direction you choose, and he soon learns to do your wants with very little telling. Following these rules will satisfy you that the dog can be taught indefinitely respecting all things which pertain to his peculiar nature.

The Watch Dog.

For a good watch-dog select one of a breed adapted to the business. There is but little that you can teach such a one, as it is somewhat of a natural trait ; and any other than a *natural* watch-dog, however much you may labor with him, will never be reliable. A barking dog, one that will be noisy on the approach of intruders, is best ; a dog that bites, but does not bark is only fit to put in barns or other out-buildings nights, chaining him up day times; and then he is dangerous, even to his keeper, as a sudden start will cause him to bite any one. To teach your dog, give him something to watch, saying, "Take care of it!" as you place him near the object. He will soon learn the word, and upon being directed to any particular thing, will faithfully guard it. While teaching him allow no one but yourself to approach him without setting him on. You may have a stranger approach and tease him, you urging him to drive the person away, and as soon as he starts, let the person run, you calling the dog back. While young do not compel him to stay too long at one thing, and when you go up to him say, "That will *do!*!" feeding him something. After the manner spoken of in the previous illustration, whenever you wish the dog to bite or go at any person or thing, you will teach him words the *reverse* of what you mean, such as, "Be still," "Get out," "Lie down." You will see that a person not understanding the dog will not be very apt to get near him, as he would naturally make use of these words, and they would be setting him

on, instead of quieting him. To call him yourself, use such convenient word as you choose, but not one naturally used by others. As this ingenious use of words is about the only new idea we can suggest to teach watch-dogs, the master can exercise his own ingenuity to render it practical.

THE TRICK DOG.

Many amusing tricks may be taught which will exhibit in a wonderful degree the intelligence of the dog. As we have before said, much depends upon the breed. A dog of one peculiar breed may be taught a certain class of tricks, while that of another breed will be entirely different in his characteristics. A well-bred dog is hard to teach any tricks except those pertaining to his nature, while a mongrel cur is quite easy to teach any. Perhaps a Spanish poodle dog is the most tractable of any, though a black-and-tan is quite apt. We give a few examples, sufficient to form a ground work for the intelligent operator to extend the list of tricks at his pleasure. We begin with a lesson

To Teach Him to Sit Up.

Sit him up in a corner, and with a switch hit him lightly under the mouth, snapping your finger, and saying, "*Sit up!*" As he comes down put him back and repeat until he will remain, which he will do in a few minutes; then say, "*That will do!*" and coax him down and caress him. When he has learned this sufficiently, set him up against a wall and try the same thing; this will require more patience, as he can so easily get over to either side. When, however, he will do it, then take him out in the center of the floor; this will take still longer; but if followed up kindly and perseveringly, he will learn to perform the trick at the word and the snapping of the finger.

To Teach Him to Sit Down.

Press your hand upon his back toward his hind legs and say "*Sit down!*!" at the same time tapping with your foot upon the floor. If he attempts to lie down or draw his feet under him, scare him up, and teach him that "sit down" is what you are after, tapping him under the chin to keep his head well up. He will, after a few lessons, sit down at the word and a tapping of your foot on the floor.

To Stand Up.

Take some food in your hands and offer it to him, holding it well up, and say, "*Stand up!*" Repeat this until he will stand up quite readily, holding out your unoccupied hand for him to support his fore feet on. Gradually take away your hand, each time that he comes up, saying, "*Stand up!*" Then take him by the forward feet and lift him up quite hard, and say, "*Stand up!*" You will soon get him so that when you lift him he will straighten up and show signs of standing; then make the effort to teach him to stand up at the word and the holding out of your hand. You may now combine this with the last two tricks, saying, "*Sit up!*" "*Stand up!*" "*Sit down!*" "*That will do!*" These are the first tricks he should be taught, as they are the foundation for others.

To Get Into a Chair.

This is very easily done, taking your own way to coax him into the chair, using the word "*Chair*" whenever you cause him to get into it. When he becomes familiar with the word, accompanied with a motion of the hand toward a chair, you may use other words in connection therewith, as, "*Go and get up into the chair!*" After he will do this handy, you may then teach him to put his paws upon the back of the chair, by asking him to "*Put them up!*" or saying, "*Up!*" assisting him at first. When he will do it readily you may teach him to put his head down upon his paws, by placing it there, and repeating the word "*Down!*" of course caressing him

each time that he complies. To have him hold his head up, tap him under the mouth and say, "Up," remembering to say, "That will do," when you are through with the trick. You may now teach him to jump over the chair by playfully coaxing him to do so saying, "Jump!"

To Make Him Go Lame.

Tap him with a little rod upon the hind foot, saying, "*Lame!*" teaching him to stand and hold it up whenever you say "Lame." Now coax him along, and if he puts it down, hit him quite smartly on the foot, making him keep it up until he will go lame at the word and a motion of the rod. Now, whenever you send him into the chair, as before, as he goes to jump down, stop him, teaching him to wait for the word "*Do.*" As he comes down with his fore feet on the floor say, "*Steady,*" and teach him to stop with his hind legs up in the chair. He is now ready

To Run on His Forward Legs.

To teach him this, take hold of his hind legs, lift them up and walk him round in a circle, and place them in a chair, saying, "*Round.*" Do this every time you perform the trick of having him get into the chair. After a while take him by the tail and lift him up, and switching his hind legs lightly, walk him around in the same manner, saying, "*Round,*" as before. With patience and perseverance he will learn to lift up his hind legs at the motion of the whip, and at the words, "*Go around,*" perform a circle, walking on his forward feet, and place his hind feet in the chair; of course the height of the chair must be adapted to the length of the dog's legs.

To Sit on a Stool.

It is now very easy to teach him to "*sit down*" on a low stool. You may then teach him to "*Take a seat*" on the stool by leading him around by his forward feet, and setting him on the stool with

his forward feet held up, saying "Seat!" You then have him taught to go on all-fours and sit down on the stool, and go on his hind-feet and take a seat, with his forward feet up.

To Teach Him to Find Things.

Take something with which he is accustomed to play, and after getting him enlivened with play, call him up to you and blindfold him, and throw the article a short distance from you. If the dog has a good scent, tell him you have "*lost*!" Then remove the blindfold and he will search and find it. Repeat this, throwing it farther each time, until you can throw your knife or anything which you have held in your hand, at a distance, you loooking in the direction, and saying, "I have *lost* my knife." He will search until he finds it and brings it to you. If the dog has not good scent, teach him to look *down* at the word "*find*," and up at the word "*up*," doing as before.

We have now given a sufficient number of examples to set forth the important rules which govern the teaching of dogs. By an observance of these you may teach your dog to climb ladders, fetch things to you, carry baskets, roll over, lie down, shut doors, and an almost innumerable number of tricks. To teach the dog, however, you must have perfect control over your temper; never whip severely, and never get out of patience.

SHOEING.

The hoof of the horse, being of a horny substance, is sufficiently hard to protect the feet while he roams over the broad fields and grassy plains. But when he becomes the servant of man (who is his natural master), and is driven over the hard roads, his hoof, if unprotected, would soon become broken and otherwise injured. He would soon become lame and be of very little use. The feet, in the horse, are what the foundations are to a building. If the foundation is insecure, the whole building is in danger of falling. So if the feet in a horse are bad or unsound, the horse is of very little value, verifying the truth of the old adage, "No feet, no horse." The foot is a beautiful and complicated piece of mechanism, showing the wisdom of the creator in adapting each part so perfectly to the wants and uses of the animal; and like all complicated machinery, requires care and attention to keep in good order, or in a healthy condition. Shoeing is one means of accomplishing this object, if properly done; but if not done as it ought to be, is often the cause of great injury. Many valuable horses have been ruined, and their feet spoiled, by bad shoeing. There are many very good blacksmiths, who are very bad horse-shoers. The shoe has two important offices to perform. First, to protect the foot from injury; and second, to keep it in its natural shape. There have been various devices adopted in different ages of the world to protect the foot of the horse. But as the iron shoe nailed upon the crust of the hoof is found to be the best and only practical shoe now in use, it is unnecessary to speak of the others. In order to properly understand the principles of shoeing, it is necessary to understand something of the structure of the foot, and

the relations each part bear to the other.. We cannot do this better than to extract from Dadd's large work :

“ *The Mechanism of the Hoof.*—A brief exposition of the mechanism of the hoof may possibly interest the reader. The external covering of the foot may be divided into four parts; namely, the wall, bars, sole, and frog. The external portion, or wall, serves to defend the sensitive tissues within. The wall, or hoof, is composed of small filaments, or hollow tubes, consolidated in such a manner as to preserve their canals distinct. These canals constitute the excrementitious outlets of the hoof, from which morbid materials find an outlet, and in these canals are found the vessels by which horn is secreted or produced. The small vessels arising from the vascular and nervous tissues of the foot proper enter, also, into these canals. The bars are a continuation of the external portion just described. They form an angle at the heels, which terminates toward the toe. They thus serve to give strength and durability to the hoof, and also to prevent contraction at the heels. When these bars are cut away or demolished by means of the butteris, then the foot often goes to ‘rack and ruin.’ The sole is much more elastic than the crust, and is a medium of the sensitive faculty, through which, together with its powers of electricity, the percussion of the foot against the ground is regulated. The frog is much more elastic than either of the parts just described. Any unnecessary paring of the same is a monstrous evil.

“ On the internal portion of the above-named parts we find a beautiful set of leaves (*laminæ*), resembling those found in the under surface of a mushroom. Their number is said to be five hundred. These articulate with a like number given off from the sensitive tissues of the foot proper, each *laminæ* having two sides and an edge, from a series of articulations, numbering three thousand. The whole surface of these articulations measures four square feet; hence, the horse having four feet, his body rests on sixteen square feet of surface, all contained within his hoofs.”

The upper portion of the crust, where it is attached to the skin at the termination of the hair, is called the coronet. The front part is called the toe. The center on either side, the quarters; and the back part, the heels, this being the thinnest and weakest part of the wall or crust. In the triangular space between the bars we find the frog, which has two distinct functions, or offices, to perform. First, it acts as a cushion, preserving the foot from injury. Secondly, it acts as a sponge, taking up moisture to supply the little water sacks that are situated inside the wall, near the heel, and from which moisture is conveyed to all parts of the foot, keeping it in a healthy condition. The sole is the portion between the bars and the wall. The inside of the sole and ground surface is covered with horny laminæ, or thin plates, which are less numerous, and smaller than those which line the crust or wall. This sensitive laminæ is very elastic and largely supplied with minute nerves, and fills up the entire space between the bones of the foot and the outside horn, or crust. The bones of the foot are put together with cartilages and ligaments, and the whole joined to the crust with the sensitive laminæ in such a way as to make a double hinge joint of the greatest possible strength and elasticity. It will be seen from the peculiar structure of the foot (and long experience has proven the fact), that the sensitive parts of the foot, inside of the hoof, do not suffer so long as the bearing of the animal is confined to the crust or wall. Hence, it is evident that when the sole bears heavily upon the shoe, the delicate inside structure becomes bruised between the sole and the coffin bone, and the horse soon becomes lame; and, if not released, very serious consequences are sure to follow. It is obvious then, that the shoe should be so constructed and placed upon the foot as to protect the wall or crust (which is the natural bearing), and confine the bearing of the shoe to that part of the foot. The shoe should be constructed in such away as to give to the crust all the support it can possibly receive. The outer margin of the shoe should be perfectly level with the width of the crust, while the

inner margin should be seated or leveled inwards so as to avoid the pressure upon the sole. And the heels of the shoe should be perfectly level, from the nail holes backward. This is for a healthy and natural foot. But this rule must, of course, be deviated from to meet the various altered conditions as they occur in horses feet. The hoof, in a natural state, is very elastic and pliable. If you will measure across a horse's foot, at the heel, with the calipers, when it is raised, and then set it upon a level surface and let him throw his weight upon it, you will find that it will measure from one eighth to quarter of an inch broader than it did when it was raised. Now the shoe should be so constructed, and nailed upon the foot, as not to interfere with this expansion and contraction every time the horse steps. To illustrate this subject more clearly and to fully understand the amount of injury inflicted upon the hoof in the ordinary method of shoeing, as practiced in a great majority of blacksmith shops in this country, examine the ordinary shoe which is used upon all occasions, and upon all forms and conditions of feet. If you will place a rule, or something that has a straight surface across such a shoe, you will find it presents a concave surface at the quarters and heels, being leveled inward from the outer edge. You will see at once that if such a shoe is nailed upon the hoof, the foot rests in a concavity, and the natural expansion of the foot is entirely prevented, it being impossible for the heels to expand up these inclined plains. Consequently, as the pressure comes upon the heels they are gradually forced inward, and contraction is the natural result, which must inevitably follow, sooner or later, when shoes of this kind are used. On the other hand, it is impossible for a shoe that is properly made and fitted to cause contraction of the foot. The hoof, in a natural state, being very elastic and pliable, we find, in the early stages of contraction, this horny case gradually becoming less. It no longer accommodates itself to the soft, pliable structure within its limits; as a consequence, the parts become bruised and feverish; the natural moisture becomes absorbed, which still further

facilitates contraction. In a short time, the sensitive portion of the internal structure of the foot becomes bruised between the bars and crust, forming what is called a corn. This will be found in the angles between the bars and the crust. The crust and the bars uniting near the heel, form a triangular space, which is diminished by contraction, pressing upon the sensitive parts within, acting like a vice. The hoof becomes dry, hard, and brittle, and liable to crack on a very slight concussion. By removing a portion of the hoof at the place indicated, we find a red spot, and in severe cases, it will have a brownish or bluish-red appearance, in which case it needs prompt attention, or it will morteate and work upward through the quarters and break out at the coronet, on the upper portion of the hoof next the hair, producing a disease known as the Quitter, frequently terminating in permanent lameness, deformity, or sometimes the entire loss of the hoof. Those who have not investigated the subject are unwilling to believe that corns in the horse's foot are of so serious a matter, and hence are ready to attribute the difficulty to almost any other than the true cause.

Shoeing for Corns.

The corn, as before stated, is caused by the contraction of the hoof. It may also be produced by wearing the shoe too long. The external crust grows down on the outside of the shoe, and the bearing is thrown upon the sole in such a way as to bruise the parts within, and corns are the result. Anything which causes a bruise upon the part indicated, may cause a corn. The first thing to be done is to pare out the angle between the bar and the crust well down with a small drawing-knife, cutting the corn to the bottom, but be very careful not to wound the sole. Now examine the foot carefully to see if there is any effusion of blood or matter underneath. If this is the case, an opening must be made in the sole for the matter to escape downwards. All of the crust that

is diseased or loosened from the sensitive laminæ, must be cut away, and the part dressed with (Dadd says) "a paste composed of equal parts of sugar and brown soap." Others recommend tar and rosin. If very bad it must be treated the same as for Quitters. If there is no suppuration discovered after the horn is well pared out, apply to the part butyr of antimony, or as Dadd says, "equal parts of tar and olive oil. This, I conceive to be the best dressing ever used for corns." Fill the place where the corn was taken out with a pallet of tow, to keep out the dirt. The hoof, from the corn backward, must be cut away just enough so that when the shoe is nailed upon the crust, no part of the heel will press upon it, relieving it from unnecessary concussion. If the shoe is light, so as to be liable to spring and press upon the heel, put a side-cork just back of the last nail-hole, and leave the heel-cork low, or take it away entirely. A horse thus shod will travel with perfect ease, which, if shod in the ordinary way, would be decidedly lame.

Shoeing for Contraction of the Feet.

Contraction of the feet, if it is not a disease of itself, is frequently the cause of a variety of very serious difficulties, such as corns, quitter, crocks, ossification, navicular joint disease, founder, and a variety of other diseases. As we have said before, contraction is caused by wearing a shoe having a concave upper surface, so that the walls of the foot, standing upon inclined plains, are forced together at every step. Now in order to expand the foot, and bring it back to its natural position, we must reverse the principle, and make a shoe with a convex bearing, or beveled outward at the heel. But great care and the utmost caution must be observed, that the bevel be only a very little removed from a level bearing, or much mischief may be done by forcing the heels too much. The hoof in this state is usually dry and very brittle, and

should be softened and made pliable by an application of equal parts of neatsfoot oil and spirits of tar; or, some recommend crude coal oil or kerosene, mixed with equal parts of cod-liver oil. (Dadd says, neatsfoot oil, 8 oz; kerosene, 4 oz; lamp-black, 1 tablespoonful; apply daily with a brush.) The shoe should be allowed to remain on the foot only a short time, when it should be replaced by one having a perfectly level bearing at the heels.

Applying the Shoe to the Foot While Hot.

Another great evil in the ordinary method of shoeing, and which is frequently the cause of much mischief, is fitting the shoe to the foot while red-hot. This has been a great cause of complaint throughout all Europe. And there has been so much said and wrote about it in that country that the practice is now nearly abandoned, while in this country the practice prevails to such an extent that it is little thought of, and looked upon as a matter of course. The application of the hot shoe to the foot, if performed by a careless workman, is frequently the cause of very much mischief, and if preformed with all possible care, and under the most favorable circumstances, cannot help doing much harm, causing an unhealthy growth of horn, and rendering the animal less sure-footed, and causing lameness, which it is difficult to trace to its true source. The hoof, in its natural state, is porous and pliable, and there is, exuding from every part of the surface, a sort of gummy, or oily substance, which evaporates as fast as it comes in contact with the atmosphere, but which keeps the horn moist, elastic, and healthy. And anything that interferes with this insensible perspiration (if we may be allowed the term), must produce unhealthy action. It is evident then, that searing with a hot iron any part of this horny structure, cannot but fail to produce serious injury to the part effected, by closing the pores, destroying the elasticity, and making it more or less hard and brittle.

The shoe should always be fitted to the foot, and not the foot to the shoe. This, of course, would be attended with more labor. But it would be better for the owner of horses to pay double the price for shoeing, than to have the feet injured by the application of hot shoes. In nearly all European countries they have made rapid advances towards perfection in the art of shoeing, mainly through the efforts of the professors of the various veterinary schools, pointing out, as they have done, the evils of one system of shoeing, and the benefits of the other.

Preparing the Foot for the Shoe.

In a state of nature the growth of the hoof is about equal to the wear. When the shoe is upon the foot this wear is prevented. The object of paring the hoof, then, should be to remove the horn equal to the natural growth of the hoof. It will be observed that if the shoes are allowed to remain on the horse's feet for a long time, without being removed, the crust becomes unusually long at the toe, and the animal is liable to trip at every step, showing the necessity of proper paring, in order to preserve the natural shape and elasticity of the foot. Another very important fact in reference to the growth of the hoof, should always be borne in mind. In a state of nature the wear comes mostly upon the toe; and, in order to preserve the proper shape of the foot, and protect it from injury, the Creator has so constituted it that the toe grows about six times as fast as the heel. Keeping this principle in view it will be perceived that the paring should be from the toe, and not from the heel. The toe, being the hardest part, is more difficult to remove. Many times the smith, either through ignorance, carelessness, or laziness, will pare down the heel because it is the easiest done, leaving the toe long, and when the shoe is nailed upon a hoof prepared in this manner, the horse stands in the same position as a man would if the heel was taken off his

boot and nailed upon the toe. As a consequence, the back leaders, or sinews, of the legs become strained; lameness ensues, the muscles become inactive, and the result is sweeny, or a stiffness of the limbs (what is sometimes called road founder), and permanent lameness. In preparing the foot for the shoe, all the old stubs should be carefully removed, and the crust carefully pared away with the drawing-knife, removing the horn mostly from the toe, cutting away all of the old, or rotten parts of the sole, that have been thrown off by the natural waste of the system (called oxfoliation), and leaving only the sound and healthy horn. Much care and good judgment is required to know just how much of the sole ought to be removed. The amount will vary with different feet. Enough should be cut away to preserve the elasticity of the foot; but enough should be left to protect the internal parts from any danger of being bruised or injured. Youatt says, when it will yield slightly under the heavy pressure of the thumb, is the best guide. The crust or wall should now be reduced to a perfect level all round, but left a little higher than the sole. The crust at the heels should rarely be touched with the knife, or anything done to them, except lightly to rasp them, in order to give them a level surface. The inner heel, being the weakest, should be particularly spared. Level the whole with a rasp. Trim out only the ragged or loose portions of the frog and bars, or such parts as may conceal dirt or other matter producing unhealthy action. The horn at the heel, next to the frog, may be cut away a little, so as to give the frog an opportunity to spread; at all events the frog should not be compressed. The frog might almost be termed the breathing apparatus of the foot; if that becomes unhealthy the rest is sure to suffer.

Application of the Shoe.

The first thing is to remove the old shoe, which is retained on the foot, by the ends of the nails being cut off, turned down, and clinched. The careless manner in which the shoes are usually

torn off is the cause of very great injury to the crust. The smith seldom takes the trouble to raise these clinches thoroughly, but with his pinchers takes hold, first of one heel of the shoe and then of the other, and with a violent wrench, separates it from the foot; then by a third wrench applied to the middle of the shoe, he tears it off. By this means he must enlarge every nail hole, and sometimes split or check the crust, or even tear portions of it away, thus weakening the very part that is to form the bearing of the new shoe. The clinches should always be raised or filed off.

Parings.

The manner of applying the shoe to the foot, as it is often practiced, is frequently the cause of mischief, and hidden lameness. The hoof is pared at the heel instead of the toe, consequently the hoof is long and thick at the toe, and in order to preserve the natural shape of the foot, the shoe is set back half or three-quarters of an inch from the toe, and the projecting part of the wall is cut away. The crust is thus weakened. The space for driving the nails is reduced, increasing the danger of pricking, or what is as bad, driving the nails too close to the sensitive parts within, and the bearing, instead of being upon the natural wall or crust, comes partly upon the sole, bruising and injuring the sensitive laminæ, and the owner wonders what makes his horse lame. As the toe grows so much faster than the heel, adapting itself to the natural wear of the foot, so the toe should be well pared down. The shoe should be set out fully to the outer margin of the wall, preserving the crust uninjured, and having its full bearing surface on the shoe. The nails should be light, properly pointed, and not driven too high, and care should be taken to have them as regular as possible. Three nails on the inside, and four on the outside, are all that is required, unless it be for a heavy draft horse. The nails should be driven well forward toward the toe. Clips are frequently the cause of obscure lameness, which it is difficult

to manage. The clip is raised from the toe of the shoe, leaving the shoe flat at that point, so that if a circle were described from one quarter to the other, the clip would be found, perhaps, half an inch back from the arc of the circle; consequently, as the hoof meets resistance in its downward growth, it is turned inward, pressing upon the sensitive structure within, inflammation ensues, and other serious consequences follow. If clips are used they should be small, and set well forward, so as not to interfere with the natural circle of the hoof.

Clinching and Finishing Off.

After the nails are driven and bent down to keep them in their places, they should be cut off smoothly with the cutting nippers, leaving just enough projecting to form the clinches. Most smiths rasp a crease under the nails to receive the clinches. This has a tendency to weaken the crust at the very point where we need the most strength, besides giving it a bungling appearance. A much better way is to take out a little of the horn immediately under each nail, with the point of a drawing knife; or, you can make a little tool shaped like a small gouge, which does the work nice and easy. Now, instead of clinching the nails with the hammer, as is usually done, have some tongs made for the purpose, while the under jaw rests upon the head of the nail, with the upper jaw you can catch the point, and bend the clinch into its place smooth and nice, and draw it as tight as is necessary without injuring the hoof. One would think, to see the rough and harsh manner that the hammer is frequently used in clinching the nails, that there was no feeling in the hoof. But let him just strike upon his finger nail with some hard substance several light blows, and he will realize something of the effect this rough hammering must have upon the hoof of the horse.

Finally, the rasping of the hoof, which is usually practiced to give a finished or improved appearance to the foot, is injurious,

and should never be allowed. It weakens the crust, and causes an unhealthy action on the surface of the hoof. At all events, the rasping should never be extended any higher upon the crust than the clinches. The nails should be slim and small, and be set well forward, so as not to interfere with the elasticity of the foot; and the shoe should be reset in from four to six weeks, or two months at the farthest.

Over-reaching.

This frequently occurs in young horses on a moderate gait, and disappears altogether on increasing their speed. It also occurs in young horses after severe driving, from the animal becoming leg-weary. A horse that is inclined to over-reach should not be over fatigued, until after he has acquired his full growth and strength. This habit arises from too great activity of the hind legs, the fore ones not being able to get out of the way. It is sometimes brought on, or at least made worse, by too light shoeing in front, and too heavy shoeing behind, the owner arguing that if the shoe is light, the horse will not have so much weight to lift, and will, as a consequence, be more likely to get the foot out of the way of the hind one. The reverse of this is the true principle. If the horse has a heavy shoe upon the forward foot, he will lift that foot with more energy, and throw it farther than if it held a light one. Many horses have been radically cured of this habit by simply placing heavy shoes in front and light ones behind. The toe-corks of the fore shoes should be a little higher than the heel-corks, while the toe of the hind shoe should be the lowest with the heel-corks considerably raised. For the same reason as above, that with a high toe, the foot is lifted with more energy, and thrown farther than it would have been with the toe low.

Interfering.

This habit, like over-reaching, is often caused in young animals by the horse becoming leg-weary, or from weakness. Or, perhaps, from some imperfection of the limb, the toe turning in or out too much. The first thing to ascertain, if possible, is the cause of the difficulty, and also the part that strikes, whether the shoe or the hoof. By applying chalk to the foot, we readily discover the part that strikes. We must, then, deviate from the ordinary mode of shoeing by making the shoe straight at the point indicated, and by cutting away the wall to correspond. By this means the feet frequently work clear of each other. If this does not succeed, examine the position of the foot while standing, whether he toes in, or out. Also, notice how he lifts his foot while traveling; if the foot toes out, and he lifts it with a swinging motion, you then want to make the inside cork the highest; this throws the ankle out, and prevents the swinging motion. On the other hand, if he toes in, and brings the foot straight forward, hitting with the toe, then make the outside cork the highest, which throws the ankle in and the foot out. The kind of shoeing that will cure one horse of this habit, may make another one worse.

Shoeing for Quarter-Crack.

If properly shod and with right treatment, there will be but little difficulty in growing out a sound hoof, but it will require care and good judgment. The horse should be shod precisely as directed for corns, for the reason that the least pressure upon the heel will have a tendency to open the crack every time he takes a step. (It might be well to put on a bar shoe.) Then with a rasp file at right angles across the crack, or rather above it, at the coronet, until it bleeds. Examine the crack carefully to ascertain if the sensitive laminæ is exposed, or if a portion of it is bruised and matter secreted; if so, pare away the edges a little and apply

butyr of antimony for a few days, putting in tow to keep out the dirt and sand; after which, apply tar and rosin, or pitch-pine gum is recommended. If the hoof is solid, drive two or three light, slim nails across the crack, and clinch on each side to hold it firmly together. If too brittle to hold the nails, fill the crack with any tar or pitch plaster, and wrap it with wax-ends, to keep it from expanding and opening the crack. Youatt says, "fill the crack with pitch and tow, then bind it together with coarse tape, then cover this with another coat of pitch, which may be moulded and polished so as to be scarcely distinguishable from the natural horn."

The toe crack is much more difficult to heal, but requires the same general treatment. Such a foot lacks moisture, and should be soaked occasionally in warm water, afterwards wiped dry, and smeared with a mixture made of 8 oz. of neatsfoot oil, 4 oz. kerosene, and 1 tablespoonful of lampblack. Dadd says, "this may be applied twice a day with a brush."

Stopping the Feet.

The hoof of a horse, standing upon a dry plank floor, especially in dry weather, soon becomes excessively dry and hard. The frog—acting like a sponge to take up moisture to supply the little water sacks, from which it is distributed to all parts of the foot through the sensitive laminæ, keeping it moist and healthy—becomes dry; the supply of moisture is cut off, the hoof becomes hard, dry and brittle, and if taken to the shop in that state, it is almost impossible for the smith to pare them. To prevent this, some stop the feet with cow-dung. But a much better material is linseed oil meal. It should be moistened with warm water, and may be used several times by moistening it each time. The feet should be stopped frequently in summer, and occasionally in the winter, in order to keep them moist and healthy. If the crust is brittle, it

is a good plan to apply to the feet a mixture of neatsfoot oil and spirits of tar, in equal parts.

Dadd says: "There is no value in any of the materials used for this purpose, such as cow-dung or wet clay, except the moisture they contain; therefore, clean water is preferable. If the weather permits, apply cold water to the hoof often and freely;" and if the hoof is brittle, or has a tendency to be hoof-bound, "wipe the foot dry, and apply with a sponge, kerosene oil and honey in equal parts, or neatsfoot oil and turpentine, equal parts."

Pricking.

If the smith should happen to drive a nail in such a way as to prick the sensitive part, he should, by all means, leave the hole open, and not drive a nail into it, so that if any matter should form from the injury, it may have a chance to work out, or serious consequences are almost sure to follow. If the horse becomes lame soon after being shod, examine the foot carefully to see if there is any heat or tenderness. Have the shoe taken off by drawing each nail separately and examine each one to see if there is any moisture on it. Having found the place, cut down to where the nail penetrated the sensitive part enough to make room for the discharge of any matter that may have formed. If much inflamed, poultice with flaxseed meal, until the inflammation subsides. Then dress with tar and rosin, or pitch; fill the opening with tow and put on the shoe again.

Who is to Blame for Bad Shoeing.

Those who have carefully perused the foregoing pages may get the idea that we are finding fault with the blacksmith. On the contrary, we feel that the smiths have great reason to find fault with the horse owners. We will try to convey the idea by a sim-

ple illustration. We will suppose that Tom Skillful has established himself in your neighborhood. He has the best of tools, and everything convenient for doing first-class work. He has studied the anatomy of the horse's foot. He knows just the thickness of the crust in each part, and he knows how to prepare the foot for the shoe in the best possible manner. He knows how to make the best shaped shoe, and how to put it on in such a way as to do the least possible injury to the foot. He uses light, slim nails, and drives them near the toe. They are sufficiently strong to hold the shoe from six to eight weeks, which is longer than they should ever remain on the foot at one time. In short, he thoroughly understands his business, and prides himself in doing it well. His prices are as low as he can afford for the amount of labor he expends upon his work.

On the opposite side of the way is the shop of John Bungler. He does everything with a rush and makes great pretensions, and brags of the amount of work he can turn off in a day. He wrenches off the shoe without stopping to raise the clinches, and with the butrass (which, by the way, is banished from nearly every respectable shop, or at least, ought to be), he slashes down the crust at the heels, and cuts away the bars. He makes a rough, heavy shoe, without form or comeliness; and, instead of fitting it to the foot, burns the foot to fit the shoe, and then nails it on with large, heavy nails, driven well back in the quarters. His shoes will remain on the foot from six to eight months, or until the crust has grown away over on the outside of the shoe. The owners, in their stupid ignorance of the great amount of damage or injury that is being done to their horses feet, think that because his shoes wear and stay on the longest, he must be the best smith; and another very important consideration is, that he works for about half or two-thirds the price that his neighbor asks. The result is, while John Bungler is busy all the time, his neighbor, Tom Skillful is idle half his time, with nothing to do but to watch his best customers, as they go in and out of neighbor Bungler's shop.

Is it a wonder then, that so many horses are made lame in the blacksmith's shop. What we need in this country is for farmers and horse owners to become educated on those subjects sufficiently to appreciate a scientific and skillful workman, and to understand and know when their horses are being injured, and their feet spoiled. This never will be until the veterinary science is elevated and encouraged, and made respectable. We are very, *very* far behind all of the European states in this respect, and the result is that nearly all of our best horses, are stiffened up, and broke down, at the age of ten or twelve years, instead of wearing and doing good service for twenty-five or thirty years. It cannot be expected that the smith at the forge can have the opportunity for scientific investigation, by which a correct knowledge of the anatomy and physiology of the foot can only be obtained. It is for the interest of farmers, and owners of horses, to put their shoulders to the wheel, and establish, endow, and sustain veterinary schools, by which means this most useful, but sadly neglected branch of education may be disseminated throughout the country.

Diseases and their Remedies.

While America seems to take the lead in mechanical inventions, in arts and sciences, in veterinary knowledge she is far behind all of the other civilized nations of the earth. While we have educated physicians in every nook and corner of the land to attend to the various ailments of the human family, you may go hundreds of miles without finding a man that has the necessary knowledge, the skill and experience, to successfully relieve your noble and valuable animals of the pains, the aches, the disease and death, that has so long run riot among them. The physician that prescribes for the human family has every advantage over the veterinary surgeon. His patients are well cared for, and can tell where the aches and pains are situated, while the poor, dumb animals are deprived of the power of speech, and the doctor can only judge of the case by the signs and symptoms that present themselves. And again, many animals have to live in places entirely unfitted for healthy animal life, and they do not receive that care and good nursing, which is so necessary for the restoration of health. We have plenty of ignorant professional men who know just enough to blister and bleed, and take away the little life that is left in the sick and dying animal. It is acknowledged by all rational practitioners, that nature is the great healer of diseases. Therefore, the study should be in all cases to aid nature. It is far better to study nature's laws, and use common sense, and good nursing, and let the medicines entirely alone, than to employ those ignorant "vets" who know just enough to destroy the little remaining life with poisonous and destructive medicines. Dadd says: "Don't place too much reliance on art and medicines.

The physician does much good when he practices rationally, constitutes himself the servant of nature, does her bidding, and does the system no harm in the use of poisonous and meddlesome medication. Many persons seem to think that the amount of good done is in proportion to the quantity of medicine administered, while in a very great majority of cases the very reverse is the case. * * *

"We enter our solemn protest against the unwarrantable use of the lancet or knife in veterinary practice. It is a disgrace to humanity, an outrage on the rights and privileges of that noble animal, the horse, over whom God has given us dominion and power—not to abuse and render their life a weary toil, and extort from them all the labor we can, but to protect them, to administer to their wants and necessities, and render their condition as happy as possible. A moral responsibility rests on every man to see that the claims which these poor creatures have upon our race are respected; that their rights are not violated; that, when sick and in a dying condition, they shall be treated with mercy, and be protected from their tormentors, the unmerciful phlebotomists. Any misguided man who can draw from the veins of an emaciated or dying horse the little blood they contain should be sent to the insane asylum, and never again be permitted to disgrace the noble nature of man. We can respect the man who conscientiously practices blood-letting; but where is the medical man who can conscientiously bleed a dying brute with a view of saving life?"

It is a lamentable fact that the veterinary service in this country has fallen into disrepute. It is looked upon as a low business, and for a man to have the reputation of being a good horse doctor would close the doors of nearly all good society against him. The result is, that with a few exceptions, the educated men are driven from the profession, and it has been handed over into the hands of ignorant and unprincipled men. Farmers, and owners of horses generally, are so thoroughly ignorant upon this subject that they cannot appreciate a scientific practitioner, or know

whether a man understands his profession or not. We need a very great reform in this matter. We ought to have veterinary schools endowed and sustained in every part of the land, and this branch of science encouraged and made respectable. In the absence of this, let every farmer and owner of horses post himself up. Let them avail themselves of the knowledge that may be had at a trifling cost. Let all read, and think, and use common sense, and much suffering will be relieved and many valuable lives saved.

Lampas in Colts.

The question is often asked, are Lampas a disease? We would ask if the swollen and inflamed condition of a child's gums while teething is a disease. The outrageous, cruel, and barbarous practice of burning the roof of the colt's mouth is just as sensible as it would be to burn the mouth of a child under similar circumstances. Dadd says: "If the colt's mouth is hot and tender while teething, sponge it out frequently with equal parts of vinegar and water, and when the teeth are seen to press hard upon the membranes of the mouth, make a slight incision over the point of the tooth, which will give immediate relief. Treat him exactly as you would treat your child under similar circumstances."

Sore Mouth.

Wash the parts frequently with hot water, as hot as the horse will bear it; then apply alum-water, or equal parts of tincture of myrrh, tincture of aloes, and water. If the mouth becomes sore from uneven teeth which cut the mouth, file off the sharp edges.

Wolf Teeth.

There is more difference of opinion upon this, than upon almost any other subject. Nearly all the veterinary surgeons of the present day agree that they do not affect the eyes. The Wolf Tooth is a small-pointed, dark colored tooth, found

just forward of the first upper molar or grinder. They should be extracted with forceps, but never knocked out. Youatt gives the most sensible solution of the wolf tooth, of anything we have found. He says : "That as the permanent teeth rise up gradually under the first or milk teeth, and press upon the roots or fangs, the portions pressed upon gradually disappear. It is absorbed, taken up, and carried away, by the numerous little vessels whose office it is to get rid of the worn out, or useless parts of the system. This absorption continues until the tooth, having nothing to hold it in its place, drops out. In a few cases, however, the permanent teeth do not rise directly under the first teeth, in which case it is crowded out of its place, and remains sticking in the gums, causing swelling and soreness. This is called a wolf tooth, and should be extracted."

Quitters.

Quitter is caused by a wound in the foot, such as a prick from a nail in shoeing, or otherwise, or from a cut with a piece of glass or any other sharp substance, or from any cause that may wound or bruise the foot so as to cause suppuration or matter to collect inside the hoof. Youatt says, "the most frequent cause is from nails in shoeing, either penetrating into the quick, or being driven so close as to press upon the sensitive parts, and cause irritation, and at length the secretion of matter within." The horn, being of an elastic nature, the small aperture that was made is immediately closed, leaving no place for the pent-up matter to discharge ; consequently, it accumulates and spreads, and increases in quantity, until it has penetrated under a portion of the cartilages and ligaments, has forced the little fleshy plates of the coffin-bone from the horny ones of the crust, and perhaps cut into the coffin-joint and produced ulcers, in every part of which it is very difficult to heal. At length it forces its way upwards and breaks out at the coronet, and is called Quitter. From the small

amount of matter discharged, the inexperienced person would form no idea of the extent of the mischief within, or of the difficulty of repairing the damage. Had the foot been examined at the first appearance of lameness, the injury might easily have been removed by simply making a small opening in the sole for the discharge of the matter in a downward direction, and the opening dressed with soap and sugar, or any pitch or rosin paste, and a little tow pressed in to keep out the dirt. No one who knows the thinness of the crust would be surprised if the smith should occasionally prick the sensitive part. In these cases the shoe should be immediately removed, and the opening enlarged so as to admit of the discharge of any matter that might accumulate. Apply a little tar and rosin, nail on the shoe, and no harm has been done. But that smith is deserving the severest execrations and punishment who would conceal or deny what he knows has been done, for fear of blame or censure, when he knows, or ought to know, the serious consequences that are sure to follow. In nineteen cases out of twenty, what is supposed to be gravel in the foot, is caused by the prick from a nail.

Treatment—First, poultice the foot for two or three days to soften the hoof; then, with a sharp knife cut away all of the diseased and loosened portions of the horn. This requires great skill and care, not to disturb any of the sound or live portions that adhere to the fleshy parts within, while every particle of the dead or loosened horn must be taken away. This being done, some recommend to syringe the part with a solution of 2 dr. of chloride of zinc in 1 pint of water; or, with glycerine. Youatt says: “The fleshy parts should be touched lightly with the butyr of antimony, then tow laid upon the place which may be kept in its place with bandages. If there is much inflammation, put a poultice of flax-seed meal over all; the next day apply another light dressing of the butyr of antimony, and place the tow over it so as to afford considerable, but uniform pressure. In a few days a new horn will cover the whole of the wound.”

A friend of ours in Canada has been very successful in treating several cases of this kind, which have come under our immediate notice, with tar and rosin. One instance was a horse that belonged to a livery establishment. After taking away all of the old horn (about half of the sole and some of the crust), he had an attendant hold up the foot while he took a hot iron in one hand, and a lump of rosin in the other, then by pressing the rosin on the iron, he run the melted rosin into the wound, then put on a layer of tow, and then more rosin, and finished it off with a coating of tar and rosin mixed, pressed a piece of leather into it while warm, which was large enough to cover the whole foot, then nailed on a bar shoe, and the horse worked every day after it in the livery, and showed no signs of lameness. On examining it, a few days after, it was found that a new horn had formed all over the wound.

Navicular Joint Lameness.

The navicular or shuttle bone, is a small bone that grows just back of the lower joint of the foot, where the coffin bone unites with the lower pastern bone. It is placed in a position to support the coffin joint, and gives to it very great strength and elasticity. It also forms a kind of joint with the flexon tendon, which passes over it, and is inserted into and grows fast to the bottom of the coffin bone. Now, if this tendon becomes strained or bruised from any cause, the parts become irritated and inflamed, the membrane and cartilage that covers the bone are destroyed, the bone itself becomes diseased or decayed, and a rough, bony adhesion takes place between the navicular, the pastern, and the coffin bone, which injures and bruises the parts at every step. Hence, the short tripping gate, the horse stands upon the toe, with an evident effort to favor the heel. Contraction is said to be the cause of the difficulty. But we believe the most fruitful cause of the mischief may be traced to the practice of paring down the

heel until the foot stands in the same position that a man would if the heel was taken from his boot and nailed upon the toe. An undue stress is thrown upon the tendon, which becomes strained and bruised ; the elasticity of the foot is destroyed, and as a consequence, that hidden lameness that has puzzled the veterinary practitioners so much to account for, contraction is the result, instead of the cause of the mischief. Dadd says :

“The animal, while standing, throws the affected foot forward, by which means the weight of the fore part of the body is transferred to the other limb; the animal has a short, tripping gait, and steps cautiously ; the muscles of the shoulder waste ; the spine of the shoulder-blade becomes quite prominent, and this condition of the muscles is often called sweeny. It will be observed, also, that the animal, when traveling, takes short steps, goes on the toe, and tries to favor the heel, or posterior parts, as much as possible. The favoring of the heel tends to destroy the function of expansibility of the hoof, and contraction of the same is the result.

“Treatment—We first ascertain whether the difficulty is of an acute or chronic character. Should it have made its appearance very suddenly, and the part feels hot and painful, then we class it as the acute stage. Should the trouble, however, be of long standing, it will be in the chronic stage. In the acute stage, cold water bandages must be applied to the region of the fetlock, which should be kept wet with water, to which may be added a little vinegar, merely to acidulate the former, or the foot should be placed in a boot, lined with a sponge. The latter is to be kept constantly wet with a portion of vinegar and water, equal parts. This may be continued for a period of twenty-four hours, at the end of which time bathe the coronet and heels with tincture of arnica. The patient should be kept at rest, and fed on light diet. In the chronic stage, counter-irritants are indicated, yet organic disease may be the result; in that event the horse always has a sort of groggy walk, and is never sound.

“Neurotomy has been practiced in view of treating this affec-

tion, but I cannot perceive how such an operation can benefit a horse having an organic difficulty. Neurotomy merely destroys, for a short time, the sensibility of certain parts of the foot ; but so soon as the divided nerve reunites, sensibility is again restored. There may, however, occur some form of lameness, which might be benefitted by neurotomy, but I think the same thing might be achieved by counter-irritation, and without the use of the knife. The counter-irritant I have found the most useful is as follows :

Cod-liver oil	2 oz.
Kerosene	3 oz.
Cantharides	1 dr.
Mix.	

“Apply a portion of the above to the navicular region, between the heels and fetlock, on the back part, once or twice daily, until the part is well blistered, which will take place at the end of a week. The more thorough the blistering, the more chance there is of doing good. No after-dressing need be applied, unless the parts become very sore ; in that event, I should lubricate with olive oil.”

Thrush, or Rotte Frog.

This disease may be known by a discharge of offensive matter from the cleft of the frog. Sometimes it is so slight as scarcely to attract attention, and does not always cause lameness, especially in its early stages, but it should not be neglected, or it will eventually end in serious difficulty. It is said to be caused by uncleanliness, by the horse standing in filth, or the reasons given for navicular joint lameness may have a tendency to produce it.

Treatment—Wash the parts well with castile soap and warm water, then apply powdered sulphate of copper, fill the cleft with cotton or tow, to keep out the dirt. In more severe cases, prepare a paste, by thoroughly mixing together one pound of tar, and two pounds of lard, two oz. of blue vitrol, and one oz. of white vitrol (which must be pulverized as fine as possible). Now wash as be-

fore, wipe dry, then take a pledge of cotton or tow, cover it with the paste, and press it snugly (but not too hard) into the cleft of the frog every night, and remove it in the morning before the horse goes to his work.

Canker.

Canker is a separation of the horn from the sensitive part of foot, and a secretion or sprouting of a fleshy fungus substance, instead of horn. It is generally the result of a neglected thrush. Youatt says, "where this disease exists there has been gross mismanagement somewhere. It is very difficult to cure, requiring the utmost skill in its management. Every particle of the horn that is separated from the sensitive parts within must be carefully cut away, and the fleshy fungus removed with the knife. Apply butyr of antimony to the parts as long as there is a disposition to secrete the fleshy fungus. But it must not touch where the new horn is forming." The parts must be carefully protected from moisture, or dust by bandages, or a leather boot. Others recommend applying a paste made of tar and rosin, equal parts, melted over a slow fire, to which is added, slowly, sulphuric acid, until effervescence, or boiling, ceases ; or collodion and castor-oil, equal parts, is recommended. The same treatment that is recommended for quitters might be followed after the tendency to secrete the fleshy fungus is overcome.

Inflammation.

Dadd says : "Inflammation of itself is not a disease, but an attendant upon nearly all diseases. It is a friendly action caused by the efforts of nature to repair the injury done to the system. It is nature's signal of distress as she calls loudly for help." It is usually attended by pain, swellings, heat, or redness. The old

method of treating inflammation by bleeding and physicing (as practiced and recommended by Youatt, and others), only reduces the vitality, leaving the system in a weakened state, an easy prey to the disease which was the first cause of the inflammation. Anything which destroys the equilibrium of the circulation, will cause inflammation. If we can in any way restore the free circulation of the blood in all parts of the system, the cure is effected. The only means of accomplishing this is by the use of warmth, moisture, stimulants, and friction, thus aiding and strengthening nature, by the use of nature's means, instead of reducing and weakening it by the use of the fleam and cathartics. If the extremities, or parts of the body are cold, use vigorous friction and keep the parts well covered with extra clothing to induce warmth. Upon those parts of the body that are unnaturally hot, use cold applications, wet packs, etc. If the inflammation is internal, accompanied with a desire for drink, let nature be the guide ; give all the cold or tepid water he will drink, and use injections of tepid water, at the same time keeping up a vigorous friction on the surface, together with warm clothing. You will thus equalize the circulation of the blood, cure the inflammation, and in most cases, cure the disease which was the first cause of the inflammation.

Itch or Mange.

The cheapest, and probably the safest, plan of treatment, and that which has proved most successful in the practice of the author, is as follows :

Unslaked lime,	-	-	1 lb.
Flour of sulphur,	-	-	2 lbs.
Water,	-	-	12 pts.

Put these ingredients in a stone jar, set it on the stove, or in a regular water bath, until it boils. During the interval, the mixture must be constantly stirred, both in view of insuring a complete

mixture, and of keeping the lime and sulphur from depositing in the bottom of the jar; for, should this occur, the jar will crack. The mixture must be stirred with a wooden spatula or glass rod. Keep the mixture boiling for about ten or fifteen minutes; then set it aside for twelve hours, at the end of which time pour off the clear liquor, bottle tightly, and cork the bottles. These should be put away in a dark closet, as the mixture soon decomposes when exposed to the sun's rays. This remedy will cure the itch on horses and cattle. It is, also, a sure cure when used on man. It is not adapted to the cure of the malady in sheep, as the sulphur is supposed to be injurious to wool. The only objection to its use is, that it has a very unpleasant odor—smells like sulphureted hydrogen. Before applying this mixture, the animal should be thoroughly washed with warm water and common brown soap; then wipe the animal dry, and apply the sulphur mixture, by means of a sponge. One application, if properly applied, will usually suffice to kill the parasites. Should it fail in the first instance, a re-application will do no harm, as the preparation is perfectly inocuous.

Sore Eyes.

Treatment—For the treatment of purulent ophthalmia Dadd recommends the following lotion :

Powdered chlorate of potass	-	$\frac{1}{2}$ oz.
Fluid extract of matico	-	1 oz.
Water	-	8 oz.
Mix.		

A portion of this lotion should be applied to the eyes, by means of a soft sponge, two or three times a day; the eyes as well as the lids must, however, be previously cleansed with lukewarm water. The patient should have a few doses of fluid extract of poke-root. About half an ounce of the extract, night and morning will suffice, which will act as an alternative.

Lockjaw.

While in the city of St. Louis, a short time ago, I was requested to visit a bay gelding, aged eight years, the property of Captain Silva. The messenger informed me, not knowing that it was a case of tetanus, that the horse was "all stiffened up." On an examination, the following symptoms were presented: The muscles in the region of the neck and back, rigid; the eyes had a sort of squinting appearance; the nose protruded; the ears were erect and stationary; the nostrils were expanded to their utmost capacity; the head, neck, and trunk seemed to be immovable, so that it was impossible to make him turn in any direction, or describe the least segment of a circle. The abdomen appeared "tucked up," as the saying is. This arose from the rigid state of the muscles of the abdomen. The hind limbs presented a straddling appearance, and the fore ones were unnaturally advanced far beyond the axis of the shoulder-blade; the bowels were constipated; the pulse was wiry, and the respirations were accelerated and laborious. The case was diagnosed as tetanus from puncture of the off hind foot. It appears that the animal had picked up a nail, five days previous, which was withdrawn by a blacksmith, and the foot was dressed in the usual way. The treatment was as follows:

The rigid muscles were rubbed, twice daily, with a portion of the following antispasmodic liniment:

Cod-liver oil	-	-	-	12 oz.
Oil of cedar	-	-	-	4 oz.
Sulphuric either	-	-	-	3 oz.

The application of the liniment was continued during a period of ten days, in which time four drachms of Indian hemp were daily placed on the tongue. The jaws now relaxed, so that the patient could eat bran mashes. At the expiration of two weeks all signs of tetanus had disappeared.

Stringhalt.

Treatment—In stringhalt, it is nearly always safe for us to conclude that it must be treated on the same general principles which obtain in the management of other nervous disorders of a chronic character, viz.: in the use of tonics, and anti-spasmodics. Take for example:

Fluid extract valerian	-	}	equal parts.
Fluid extract of poplar bark	-		

Does, one ounce, morning and evening; to be placed on the tongue. The spine and affected limb or limbs should be rubbed every night for a couple of weeks, with a portion of the following:

Fluid extract of poppies	-	-	6 oz.	
Proof spirit	-	-	-	1 pt.
Mix.				

Should the animal prove to be spavined, the following liniment is recommended:

Cod-liver oil	-	-	-	}	equal parts.
Kerosene oil	-	-	-		
Mix.					

A small quantity of this liniment should be rubbed on the seat of spavin, inside of the hock, once or twice daily, until counter-irritation is accomplished, which shall be known in consequence of the hair falling off; then discontinue the liniment, and lubricate the affected parts with olive oil, and wait patiently, so as to see what nature will do for the case. "Patient waiters are no losers." The popular, or rather the ancient, method of treatment does more harm than good.

Stomach Staggers.

This disease arises from an overloaded condition of the stomach causing a pressure upon the heart and lungs, thus interfering with the free circulation of the blood, causing stupor, and a disposition

to pitch forward, resting the head against the wall, or any object that may be in his way. Dadd says :

“The proposition of cure is, that the digestive function shall be aroused, and the only way to accomplish that is by administering bitter tonics and stimulents. In this view, the following prercipitation is offered :

Fluid extract of black pepper	-	4 oz.
Fluid extract of ginger	-	6 oz.
Hyposulphite of soda	-	2 oz.
Water	-	4 oz.

Dissolve the hyposulphate in water, then add the pepper and ginger. Give the animal a wine-glassful every four hours. A stimulating injection may be thrown into the rectum occasionally, composed of a handful of fine salt to about four quarts of water.

The animal should be allowed to stand quietly in the stall, and the medicine must be given with care, for the least excitement may augment the cerebral difficulty. So soon as the medicine arouses the digestive function, and the food gradually passes the pylorus into the intestines, the animal will obtain relief. Both food and water should be withheld until there is some marked improvement; the patient has had enough food for sometime, and water only retards digestion.”

Cough.

Treatment of Chronic Cough—Give the patient daily one ounce of the fluid extract of Indian hemp (foreign), and offer him occasionally some flaxseed tea; or sprinkle in his food, every night, a handful of unground flaxseed. Should this fail to effect a cure prepare the following :

Fluid extract of bloodroot	-	-	4 oz.
Fluid extract of pleurisy-root	-	-	6 oz.
Common syrup	-	-	½ pt.
Mix.			

Dose, two ounces per day.

The acute cough may be treated in the same manner as above, by substituting for the syrup half a pine of syrup of squills.

In the case of liver disease, accompanied by cough, give the animal once ounce of fluid extract of mandrake every six hours, until it operates on the bowels, or the membranes of the mouth lose their yellow tinge.

Acute Diseases of the Eye.

In the early stage of this disease, and when scalding tears run copiously over the cheeks, we denominate it catarrhal ophthalmia. The disease is not of a serious nature, but often becomes so in consequence of the outrageous treatment practiced, such as bleeding, purging, and the local application of the lunar caustic. The proper mode of treatment is to keep the patient on a light diet, and occasionally bathe the region of the eye with an infusion of poppies or hops ; sometimes with tepid or cold water, as the case may seem to indicate, according to the rational judgment of the owner of the afflicted animal.

Glanders and Farcy.

Dadd says : "These diseases are contagious, not only to the horse, but may readily be communicated to man." He gives several cases of horrible deaths from this terrible disease. But, fortunately, it is very rare in this country. He says that many persons "declare their horses to be subjects of glanders, simply because they had enlarged glands under the jaw, and a nasal discharge ; and, by a successful treatment of the same he has had the credit of curing glanders," a feat which he (Dadd) never pretends to have accomplished.

Lice on Horses.

The remedy I have found most efficacious is composed of

Crude Cod-liver oil	- - -	1 pt.
Pulverized lobelia	- - -	2 oz.
Mix.		

This should be thoroughly rubbed all over the body by means of a stiff brush ; at the expiration of four hours, carefully wash the horse all over with soft soap and warm water. It may be necessary to make a second and even a third application, on successive days, ere the parasites are killed. The parasites can be seen with the naked eye ; therefore the owner of the horse must be the judge as regards the number of applications needed.

Hide Bound.

Treatment—The best remedy, if the season permits, is a run at grass, taking care to give a good feed of oats every night ; otherwise the grass will not improve his condition. In the stable the treatment is as follows : Give the animal one ounce of the fluid extract of camomile flowers every morning, before feeding, and at night mix one ounce of powdered poplar bark with the oats. This, together with good food and rest, will complete the cure.

Poll Evil.

This disease arises from blows or bruises from any cause on the top of the head, or nape of the neck.

“Treatment—Should the tumor be discovered in its early stage, before matter has formed, the parts should be bathed often with a portion of vinegar and water, equal parts ; or else a cold water dressing or pad may be applied, which should be reapplied as fast as it becomes dry. Half an ounce of powdered chlorate of potass

should be given night and morning. This may be dissolved in half a bucket of water, which the horse will drink. In the course of a couple of days, the practitioner will be able to determine whether or not the tumor is likely to suppurate ; if so, it will have increased in size, and have a soft fluctuating feel.

“ Just as soon as matter can be detected, the abscess must be punctured at its base, by means of a thumb lancet. It will not do to allow the matter to accumulate ; for, if so, it will burrow and spread in various directions, making a very extensive and formidable abscess. It would be necessary to make a free opening into the abscess large enough to admit a man’s finger, and if, in the course of a day or two the opening should partly close or contract, it must be dilated with a knife. So soon as the abscess is laid open, all the matter must be squeezed out, which process must be accomplished by the use of sponge and hot water. We then, in view of removing every particle of matter, carefully inject the cavity with a quantity of pyroligneous acid water, equal parts. A glass syringe is best, as the acid has a bad effect on a metal one.

“ It will be necessary to sponge the cavity once daily for several days, or until matter ceases to form. In the meantime the animal must be put under treatment, for it is very rare that this disease can be cured by local treatment alone. My usual custom is to give the patient thirty grains of the iodide of potass, twice daily, in half a bucket of water. The animal will not refuse to drink it. Should he be weak and emaciated, tonics and stimulants are indicated. Half an ounce of powdered golden seal, and the same quantity of ginger, given with a small quantity of water, as a drench, daily, will answer the purpose. Sometimes it is advisable to put a pad of cotton cloth, or a large wad of oakum on the poll, in view of keeping the skin and sub-tissues in contact, by which means they more readily unite. The pad may be secured to the part by passing a cotton roller, five inches wide and three yards in length, around the neck. At the poll the ban-

dage is to be further secured, by tying a lock of the hair of the forehead with a lock of the hair of the mane. This precaution prevents the bandage from slipping backward. The bandage should be removed and readjusted every day, and the parts are to be cleansed and syringed, in the manner just alluded to, as long as necessary. After the lapse of a few days, should the secretion of matter decrease, then the chances are in favor of a cure.

“Cases, however, will sometimes occur which set at defiance all our skill. In such we find that either the ligamentary, tendinous, or fleshy parts, or perhaps the bones, are involved, and it often happens that fistulas or pipes run in various directions. Such cases require the service of a surgeon, who will dissect out the fistulous pipes, and remove all the diseased portions of the flesh and bone. The after treatment is then the same as we have just indicated.

Fistulous Withers.

This disease resembles poll evil, and in a majority of cases, owes its origin to the same exciting causes ; namely, external bruises, or injury inflicted by a bad fitting collar or saddle. The treatment is the same as that recommended for the cure of poll-evil.

Warts.

If small, they may be cut off with a knife or scissors, and the roots touched with caustic or a hot iron. If large, a strong thread may be tied tightly around it, and it will soon drop off ; or, a few applications of per-manganate of potash will destroy them, when they may be removed with a knife.

Swelled Legs.

Treatment—The remedies are hand-rubbing, exercise, and stimulating liniment. The best liniment for local dropsy of this



character is as follows :

Fluid extract of wormwood	4 oz.
Fluid extract of ginger	3 oz.
Spirits of camphor	1 pt.

Rub the region of tumefaction with a portion of this liniment every night.

When swelling of the limbs do not assume a periodical character, and suspicion of predisposition cannot be entertained, then, in addition to the application of the liniment, give the animal, morning and evening, one ounce of the fluid extract of buchu.

Bots.

Nature has endowed these parasites with such tenacity of life, that no matters known to us will effect their destruction, though a few may answer the purpose of their expulsion. Bots are so hardy as apparently to survive immersion in oil, in alcohol, spirits of turpentine, and even powerful solutions of mineral acids. The continued use of salt, mixed with the food, appears, however, obnoxious to them ; for sometimes, under its use, their hold gives way, and they are ejected. Bitters, purgative, and the mechanical irritation of pointed bodies, as pewter, tin, etc., have no effect whatever upon bots.

When the horse is attacked with pains which are supposed to be from bots, we would recommend the following remedy : Sweet milk, one pint ; molasses, half pint ; cowage, one drachm. Sometimes the milk and molasses will have the desired effect. Cowage is an old remedy for worms in children. When it is used the bottle should be inserted well into the mouth, and care taken not to get any of it on the lips, or it will cause a pricking sensation, like nettles.

Worms.

Symptoms—The usual symptoms indicating the presence of worms in the intestinal canal are, sometimes, a scurfy, yellow

mucous accumulation around the margin of the annus ; the appetite is not uniform ; the bowels are irregular, sometimes loose, and sometimes constipated ; and the feces are often shrouded with shreds of mucus, of a yellow color. When ascarides are present (located in the rectum), the horse is much inclined to rub his tail against any post or fence he can get at, and he employs himself at such feats against the sides of the stall, in view, probably, of allaying the intolerable itching which usually attends the presence of these parasites.

The lumbrixi, or round worms, sometimes exist in the intestines in great numbers. They are then apt to be hurtful. In such cases, the coat looks unthrifty, and the hair has lost its natural glossiness, and appears rough to the sense of touch. It has been noticed, also, that when horses are afflicted with intestinal parasites, their breath gives out a fetid odor, and they have a sort of dry, hacking cough. It is well known, however, that some horses, enjoying, apparently, the very best kind of health, are often the subjects of worms.

Treatment—Most of the remedies recommended in the ancient works on farriery are just about as likely to kill the horse as the parasites, and consequently are, to say the least, unsafe. The true theory is this : worms are the result of indigestion ; hence our object, by way of prevention, is to give tone to the digestive organs ; and soon after the worms have congregated in the intestinal canal, bitter tonics and alteratives are obnoxious to them. They then die, are digested, and pass from the anus as fecal matter.

Suppose we give the infested horse powerful purges, tartar emetic, calomel, turpentine, etc., as the books recommends. We may succeed in their expulsion, but that does not mend the matter ; for the agents just named are all more or less prostrating, and create a worse state of digestive derangement than that which previously existed, and soon, by virtue of spontaneous generation, a new crop of parasites make their appearance.

When a horse shows any of the symptoms here alluded to, indicating indigestion, or the actual presence of worms, I recommend that an occasional dose of the following be given :

Powdered poplar bark (*populus tremuloides*) }
 Powdered sulphur - - - - - } equal parts..
 Powdered salt - - - - - }
 Mix.

Dose, one table-spoonful, to be mixed with bran or oats.

EXAMPLES OF VERMIFUGES.

No. 1—Fluid extract of wormwood, four drachms ; to be given in the morning, before feeding time, for several successive days.

No. 2—Give once of fluid extract of pink-root, every morning, before feeding, for a week.

A GOOD REMEDY FOR TAPE-WORM.

Give four drachms of the solid extract of male fern (*aspidium felix mas*) every other morning, during a period of about ten days. This is said to be a *specific* for tape-worm.

Inflammation of the Kidneys.

Symptoms—Hard and accelerated pulse ; quickened respiration, indicative of pain ; back, arched ; legs, straddling ; the head is often turned toward the loins, or region of pain ; the animal is unwilling to describe a circle with its body, and while the acute stage lasts, scarcely, if ever gets down on the floor ; the urine is reddened and scanty ; finally the animal crouches when pressure is made over the region of the loins, and, as is the case in all acute affections, thirst and loss of appetite are observable.

Treatment—The treatment of inflammation of the kidneys, in the acute or inflammatory stage, is just such as would be proper supposing the case to be one of enteritis, or peritonitis. Twenty or forty drops of fluid extract of gelsemium may be placed on the tongue two or three times, at intervals of four hours ; fomentations of hops or poppy-heads (warm) should be applied to the

loins, and occasional enemas of warm water may be thrown into rectum. The drink should consist of what is known as flaxseed or slippery-elm tea. Soon the inflammatory symptoms will subside, the patient will manifest some relief from pain, and the color of the urine will change, become lighter and thicker in consistency. We then discontinue the above treatment, and administer one ounce of fluid extract of buchu, morning and evening. This treatment, aided by rest and good nursing, usually completes the cure.

Should it be suspected that the animal has a fit of pain, caused by the "gravel," or passage or presence of urinary calculi, then two drachms of muriatic acid should be mixed in the ordinary drink, every time the animal is watered. He should also have a small quantity of powdered slippery-elm or flaxseed mixed with the food. Horses the subjects of urinary calculi pass urine, which, on being caught in an earthen vessel, deposits phosphates and other earthly matter. When this occurs, and the animal has a fit of pain or gravel, we may infer, in the absence of more positive proof, that urinary calculi are present in some portion of the urinary apparatus.

Inflammation of the Bladder.

The principal symptom of inflammation of the bladder is frequent urination, accompanied by straining and pain. Sometimes the urine dribbles away, involuntary or not as the case may be. It appears that the least distension of the bladder causes pain; hence the effort to keep it empty. The urine is usually high-colored, or, rather, of a dull red color. The animal stands with his hind limbs widely separated. The treatment is precisely the same as that just recommended for inflammation of the kidneys.

Retention of Urine.

Treatment—In most of these cases we find the neck of the bladder spasmodically contracted. The spasm may be either primary or it may accompany spasmodic cholic, which is often the case. In fact, some animals, when suffering from retention of urine, act just as if they had colic ; hence it is, in such cases, highly necessary that the bladder be examined by introducing a hand into the rectum. By this means, should the bladder be distended, it can easily be discovered. The catheter must then be introduced, or the animal will die from rupture of the bladder. Provided no catheter should be at hand, I would throw into the rectum copious enemas of warm water, and administer one or two ounces of tincture of assafetida as an antispasmodic, which may possibly have the desired effect.

Profuse Urination.

An animal the subject of diabetes is usually very thirsty. The urine is light-colored, almost transparent. It has not the ordinary odor of common urine, but something like musty hay.

Treatment—The indications in the treatment of this affection are, to give tone to the system and sustain the general health. A drachm or two of the sulphate of iron may be occasionally mixed with the oats (the latter must be of the best quality), and one ounce of the fluid extract of buchu may be given every night. Good wholesome food and an occasional drink of slippery-elm tea are also indicated. Should the disease not yield to such treatment as this, the case may be considered incurable.

Curbs.

Treatment—So soon as the injury is discovered, the part should be fomented often with either an infusion of hops or poppy-heads. It is best to apply the infusion cold, and by means of a sponge,

the animal being kept at rest during the acute stage. Sometimes, in view of relieving the tension of the sprained ligament, it is customary to tack on a high-heeled shoe. This may or may not be necessary, and depends on the severity of the case. After having modified the inflammatory action, the high-heeled shoe may be dispensed with. Then, in order to get rid of the chronic enlargement, the part must be daily anointed, for a short time, with a portion of the following :

Powdered iodine	- - -	1 dr.
Simple ointment	- - -	7 dr.
<u>Mix.</u>		

After a short time, the animal may be put to light work, still making an occasional application of iodine ointment.

Should the parts about the hock degenerate into a hard callous, friction with cod-liver oil may be employed. Should this fail to have the desired effect, then make a few applications of the acetate of cantharides, prepared as follows :

Acetic acid (fluid)	- - -	1 oz.
Water	- - -	5 oz.
Powdered cantharides	- - -	1 dr.
<u>Mix.</u>		

Bog, or Blood Spavin.

It is always dangerous to attempt to remove the varix, or to puncture it ; and the only proper mode of treatment, in view of limiting its growth, for it cannot be cured, is to bathe it often with the following astringent lotion :

Fluid extract of witch-hazel	- - -	2 oz.
Fluid extract of bayberry bark	- - -	4 oz.
Proof spirit	- - -	1 pt.
<u>Mix.</u>		

Ringbone and Bone Spavin.

Our object in the treatment of ring-bone is merely to aid nature. Excuse the animal from work, and apply sedative lotions (cold

water dressings) so long as the acute stage lasts ; then, when the case passes into the chronic stage, apply counter-irritants for a week or two, and finally, turn the patient out to grass. The following will be found an effect sedative lotion :

Spirits of camphor	- - -	2 oz.
Fluid extract of wormwood	- -	1 oz.
Vinegar	- - -	5 oz.

To be applied twice daily.

The following is an excellent counter-irritant for ring-bone in its chronic stage :

Cod-liver oil	- - -	} equal parts.
Kerosene	- - -	

Apply once or twice daily, until a crop of pustules appear ; then omit the application, and reapply it at the expiration of two or three intermitting periods.

The remedies used by veterinary surgeons generally, are oil of cahtharides, acetate of cantharides, blistering ointment, ointment of biniodide of mercury, and, lastly, the actual cautery, or heated iron. I have tried all except the latter, which savors too much of barbarity, and never found anything to equal the preparation here recommended—namely, cod-liver oil and kerosene.

Sweeny.

All veterinary writers agree that sweeney is not a disease of itself. But that the seat of the difficulty is in the feet, usually caused by bad shoeing.

Treatment—The principal treatment is rest; afterward diminish the work, and, by proper diet and tonics, increase the power to do it. The muscular patrs affected should be bathed, morning and evening, with a portion of the following :

Fluid extract of wormwood	- -	2 oz.
Fluid extract of poppies	- - -	2 oz.
Proof spirits	- - - -	1 pt.
Mix.		

Should the feet prove to be very hot and feverish, frequent bathing with cold water, or a cold infusion of hops, will have a very good effect. In the mean time give the animal two drachms

of fluid extract of gelseminum, once or twice per day, until the feverish symptoms subside. Then, when the case passes into the chronic stage (sweeny), the shoulders and wasted parts are to be well rubbed, often, with a portion of the following :

Fluid extract of ginger	4 oz.
Gum Camphor	1 oz.
Olive oil	1 pt.

Pulverize the gum ; add it to the oil, in which it will soon dissolve ; then mix with it the ginger, and the preparation is fit for use.

Should the muscles of the shoulder waste, in consequence of chronic disease or altered structure about the hoof or within it, such as rine-bone, ossification of the lateral cartilages, etc., then a strong counter-irritant must be applied, for a week or so, around the coronet. At the same time we should treat the shoulder as above. A good counter-irritant for the coronet may be thus prepared :

Cod-liver oil	} equal parts.
Kerosene oil	
Mix.	

Rheumatism.

Treatment—In the treatment of Rheumatism stimulating an inflammatory type, our first object is to produce a sedative effect on the heart and its vessels of circulation. With this object in view, we administer one or two drachms of fluid extract of gelseminum every four hours, until the pulse becomes softer. In the meantime a few doses of nitrate of potass should be given in the water which the animal drinks, at the rate of one ounce per day, divided into doses in proportion to the number of times the patient is watered. So soon as the animal evinces signs of improvement the above treatment is to be discontinued ; then give six drachms per day of fluid extract of prince's pine. The joints which seem to be affected are to be bathed occasionally with camphorated vinegar, in the proportion of one ounce of camphor to eight ounces (fluid) of vinegar.

Chronic Rheumatism.

Chronic Rheumatism is usually the sequel of the acute kind. It is generally obstinate and lingering, and prone to recur. Unlike the acute kind, pain is alleviated by counter-irritation and exercise; and when the patient gets warmed up, as the saying is, he either forgets his pains or becomes relieved. Bathing with warm vinegar has a good effect in the treatment of this disease, but I have found the following liniment useful in almost all the cases that have come under my care:

Oil of cedar	- - - -	2 oz.
Sulphuric ether	- - - -	1 oz.
Proof spirit	- - - -	1 pt.

First, mix together the oil of cedar and sulphuric ether; then add the proof spirit, and after shaking it awhile, it is fit for use. Give the animal one fluid drachm of the fluid extract of colchicum-root, night and morning, for three days; after which give, daily, twenty-five grains of the iodide of potass, dissolved in half a gill of water. Should the animal show any signs of debility or loss of flesh, tonics, stimulants, and nutritious diet are indicated.

Founder.

The horse may be put into the stable at night all right. In the morning he is observed to be all in a heap, as the saying is—his flesh quivering, pulse very active, respirations quick and jerking; the flanks are tucked up, the back is roached, and the fore feet are sent forward so that the animal treads on his heels; and, when compelled to move, he endeavors to throw the weight of his body on the hind legs. He is thirsty and feverish, but has no appetite. All appearances about him indicate that he suffers great pain. When a hand is placed upon the fore-feet, they feel unnaturally hot. Such are the most prominent symptoms of laminitis, or fever in the feet.

Treatment—The principal objects to be accomplished are, to keep the feet cool by frequent sponging with cold water; next, the bowels must be kept loose by means of bran-mashes, or, if necessary, a dose of Glauber salts—dose, twelve ounces, dissolved in a pint of warm water, to which add half a gill of syrup—and an occasional enema of soap-suds, and also a few doses of fluid extract of gelsemium, say two drachms night and morning. This is the kind of treatment that the author has found most successful during a long period of practice.

Lameness.

We have already considered the nature and treatment of various forms of lameness, occurring in consequence of strain or sprain of different parts of the body; also that attending rheumatism and diseases of the feet. It only remains to offer a few remarks on some special forms of lameness. Lameness occurs in one of two forms. We either find it in the acute stage, when from injury, or other causes, it comes on suddenly; or else in the chronic stage, that form which has existed for some time. Therefore, there being only two forms of lameness, there are only two indications to fulfill, namely: in the acute stage, we endeavor to lessen the activity in the circulation, heat, and pain of the parts by rest and cold water bathing; and when pain exists, we mitigate it by bathing the affected parts with cold infusion of hops or poppy-heads. When the affection assumes a chronic type, we apply stimulants and counter-irritants. The following is the best remedy in use:

Aqua ammonia	-	-	3½ oz.
Spirits of camphor	-	-	3 oz.
Salt (bay or rock salt)	-	-	8 oz.
Water	-	-	2 pts.

Dissolve the salt in the water, with a few drops of aqua ammonia; allow the impurities to settle, and add the clear liquor to the camphor and ammonia, the latter having been previously mixed. A portion of this should be rubbed on the region of the lameness morning and evening. Sometimes the actual seat of lameness may be somewhat obscure, yet we can generally find out which limb it is in; then to make sure that we shall hit the mark, the whole limb may be treated. Should counter-irritation be necessary, strong liniments and blisters, such as are in general use, are recommended.

Scratches.

This disease is well known to all horsemen. Treatment—Wash the parts well with castile soap and water, and when dry apply once a day the collodion, $\frac{1}{2}$ oz., and castor oil, 1 oz.; or use a saturated solution of the bichloride of mercury once a week, but not oftener, or mischief may arise in consequence of a too free use.

Grease Heels.

This is a white, offensive greasy discharge from the heels of the horse; the skin becomes hot, tender, and swollen; the acrid char-

acter of the discharge often causes large portions of the skin to slough away, leaving an ugly sore behind. Treatment—Open the bowels with the following ball: Barbadoes aloes, 1 oz., pulverized gentian root, 2 dr., pulverized ginger, 1 dr., water sufficient to make the ball; wash the parts well and poultice for two or three days with the following: Flax-seed meal mixed with a solution of 2 dr. sulphate of zinc to a pint of water, after which keep clean and bathe frequently with glycerine, or the solution of zinc, or a solution of the chloride of lime may be used; or the bichloride of mercury may be used in inveterate cases with good results, provided it be not repeated oftener than once a week.

Dadd says: Wash the parts well with castile soap and water, then rub dry, and apply three times a day a solution made of saltpetre, 2 oz., water, 1 pt., glycerine, 4 oz.; after each application, dust the part with pulverized charcoal. Give each day, for four or five days, mixed in bran mash, the following dose: Iodide of potass, 20 gr., sulphur, 4 dr., powdered sassafras bark, 2 dr., gentian, 1 dr. After that time discontinue the treatment and apply to the parts a mixture of equal parts pyroligneous acid and coal oil twice daily, and dust with charcoal after each application.

Wind Broken or Heaves.

This disease is well known, but it is not as prevalent as it was a few years since. A horse with the heaves should be fed on cut feed, or have his hay wet with water into which has been thrown a handful of salt. Some recommend wetting the hay with weak lime water. An occasional feed of carrots, parsnips or potatoes sliced is good. It has been found that if horses with the heaves are taken onto the western prairies they will be frequently entirely cured. Dadd says, "this is on account of the resin weed that abounds there." He says, "2 oz. of the fluid extract of resin weed, given night and morning, will cure the heaves, except in cases where the air cells of the lungs are ruptured." "But of all remedies nothing equals a run at grass on the prairie lands." There are many remedies given for curing heaves, long enough to trade horses; one is, oil of tar, oil of amber, equal parts; give 15 or 20 drops in the feed daily; another, Spanish brown and ginger, equal parts; dose, teaspoonful three times a day.

Roaring.

Roaring, thick wind, whistling, etc., are often the sequel of strangles, influenza, laryngitis, and other affections of the respira-

tory passages, and hence have an accidental origin. In such cases, we may entertain a hope of doing some good by means of medicinal agents and counter-irritation. Treatment: The medicines which have proved most successful in my practice are as follows: Iodide of potass, 4 oz., fluid extract of stillingia, 12 oz., water, 4 oz.; mix.

Give the patient two ounces daily, by means of a small vial; and rub the region of the throat every night with a portion of the following: Cod-liver oil and spirits of turpentine, equal parts.

Flatulent Colic.

Give the patient a wide stall and plenty of bedding. Let him lie down, rise, and tumble about just as much as he pleases, only watch and see that no accident happens to the animal. The colic drench used by the author, during the past ten years, is composed of the following: Fluid extract of Jamaica ginger, 2 oz., fluid extract of golden seal, 1 oz., powdered hyposulphite of soda, 1 oz., water, 4 oz. Dissolve the hyposulphite of soda in the water, then add the other ingredients to it. The dose may be repeated, if necessary.

A good wisp of straw, vigorously applied to the belly and flanks, and also to the limbs, may do some good, because we thus preserve the equilibrium of the circulation. Enemas of soap-suds should be administered often, and provided the case be a curable one, the horse will soon recover.

Spasmodic Colic.

In this disease the horse is attacked with spasms and sometimes becomes furious, kicking and striking at any one that comes near him. Dadd recommends antispasmodic medicines, such as assafetida, lobelia, sulphuric ether and copious injections of warm water, or an infusion of lobelia. Dadd gives an account of several cases of this disease that were successfully treated when the horse became unmanageable, and were put under the influence of chloroform and sulphuric ether, administered by means of a sponge on the end of a pole. They were kept under the influence of the ether from half an hour to an hour, when a little antispasmodic medicine was given, or an injection of the infusion of lobelia, and the cure was effected.

Inflammation of the Peritoneum.

The most marked symptoms of peritonitis are as follows: In the early stage, the animal paws slightly, but not with that sort of viciousness which is characteristic of colic or strangulation of

the intestines. Soon, he shows febrile symptoms; the pulse runs up to seventy or more, and a shivering fit sets in. When pressure is made on the abdomen, the animal evinces signs of pain. He will sometimes get down and lie on his pack, but he soon finds out that the best way of lessening his pains and aches is to keep as quiet as possible. His tongue is usually coated, and the bowels are inactive.

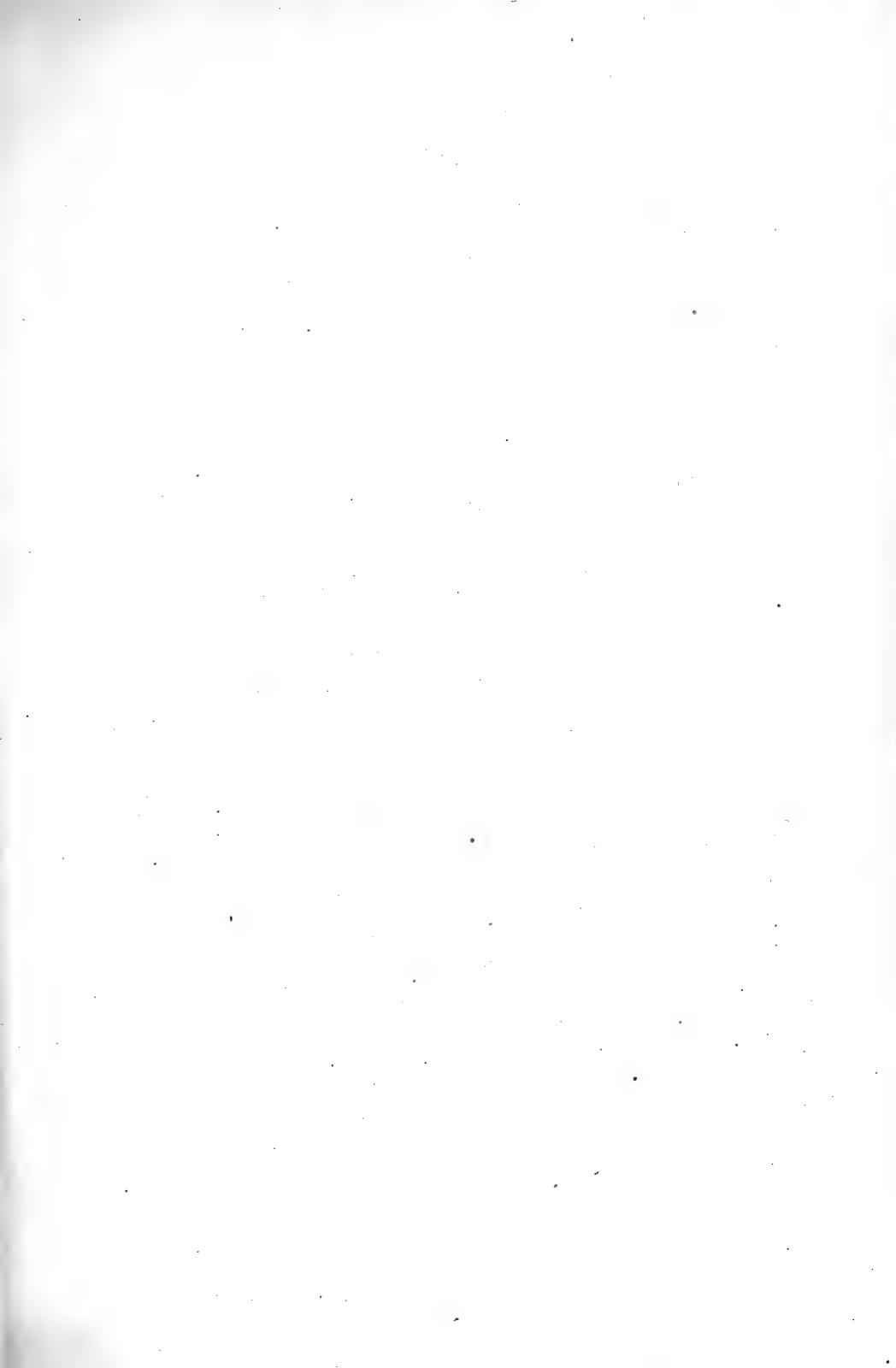
Treatment—Give the patient mucilaginous drinks, as in the case of enteritis, and drench him occasionally with an infusion of poppy-heads, in pint doses. Empty the rectum by means of soap-suds enemas, and then throw in a quart of infusion of hops. Cloths, wet with warm water, should be applied to the abdomen, and the surface of the body should be kept warm by means of blankets. This kind of treatment, with good nursing, will probably restore the animal to health. Should symptoms of dropsy set in, give two ounces of fluid extract of buchu, daily.

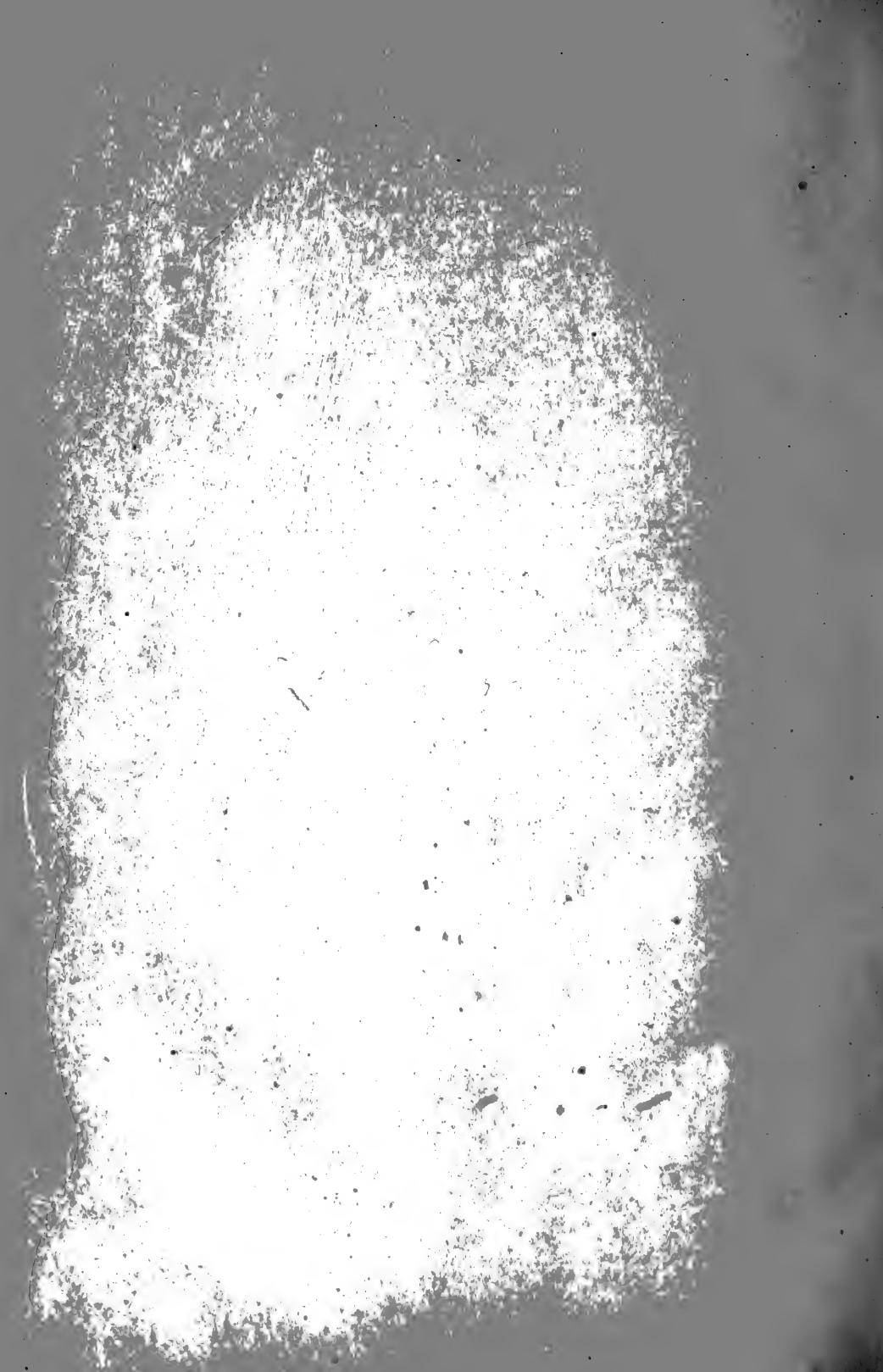
Distemper.

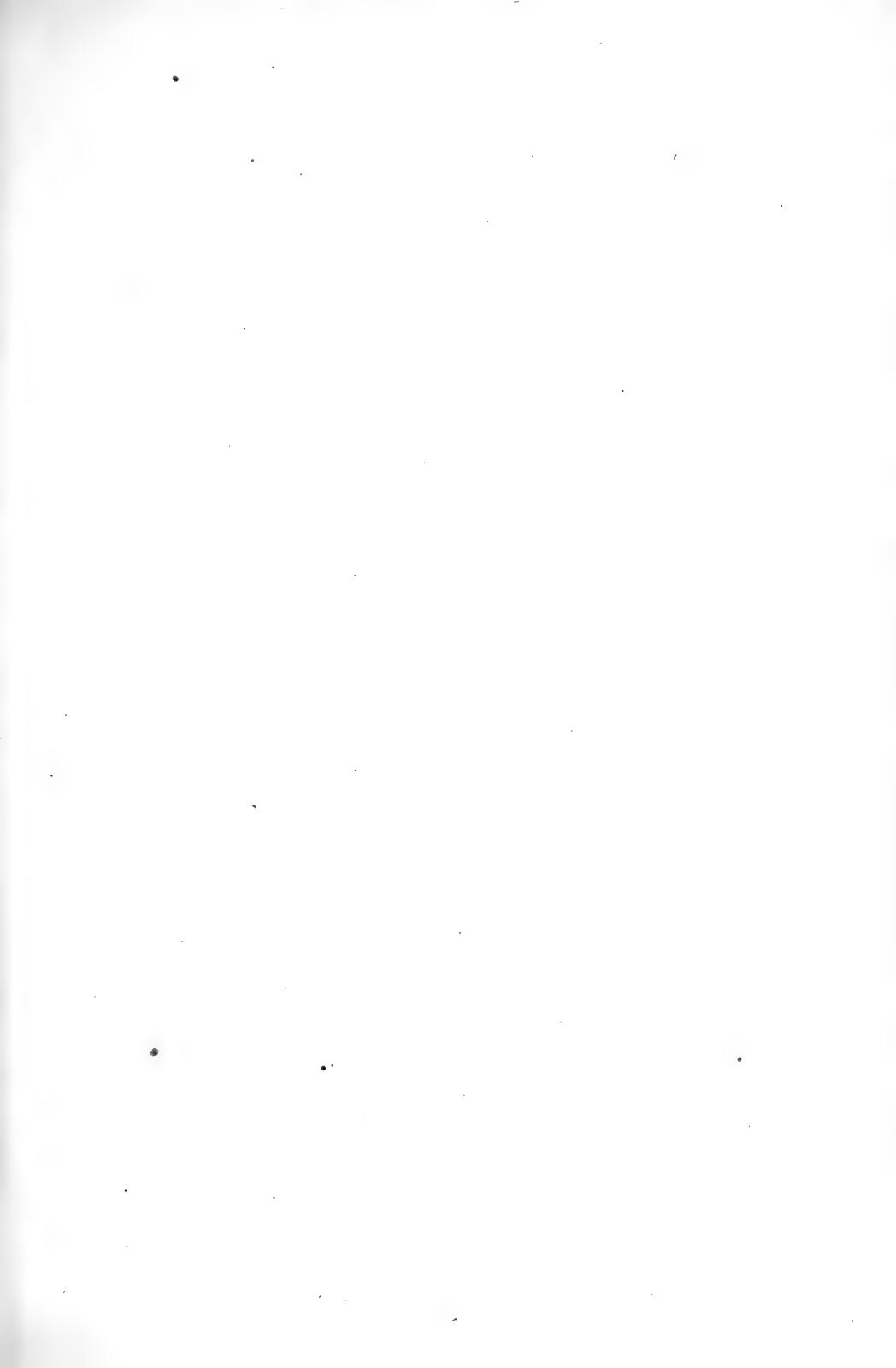
This disease usually attacks young horses and colts. In its simple form it requires very little treatment, except good nursing. Give the horse warm bran mashes, and occasionally place a little tar on the tongue to facilitate the discharge from the nostrils. In more severe cases, if there is much inflammation, apply to the throat wet bandages of cold water, frequently changed, to reduce the inflammation. Then poultice the throat with flax-seed meal, and give warm bran mashes, into which sprinkle 1 oz. of chlorate of potass. Perhaps it will be advisable to apply a counter-irritant to the throat, composed of equal parts of cod liver oil and spirits of camphor. As soon as the swelling under the jaw becomes soft it should be lanced. In very severe cases, where there is great distress for breath, and danger of suffocation, Dadd gives several accounts of successful cases of tracheotomy, or tube inserted in the wind pipe. He makes an incision in the skin, directly over the wind-pipe, cuts out a piece the size of the tube, which is held in its place by the means of elastic tapes, which are passed upon each side and tied on the back of the neck. If there is no tube to be had, make a small opening in the windpipe, cut a small orifice in each side and attach the strings, and tie them over the neck just tight enough to keep the jaws of the wound open. Dadd says, the operation, as formidable as it may appear, is unattended with danger, and should always be resorted to in those cases of stoppage of the nostril, when suffocation and death would otherwise be the result.

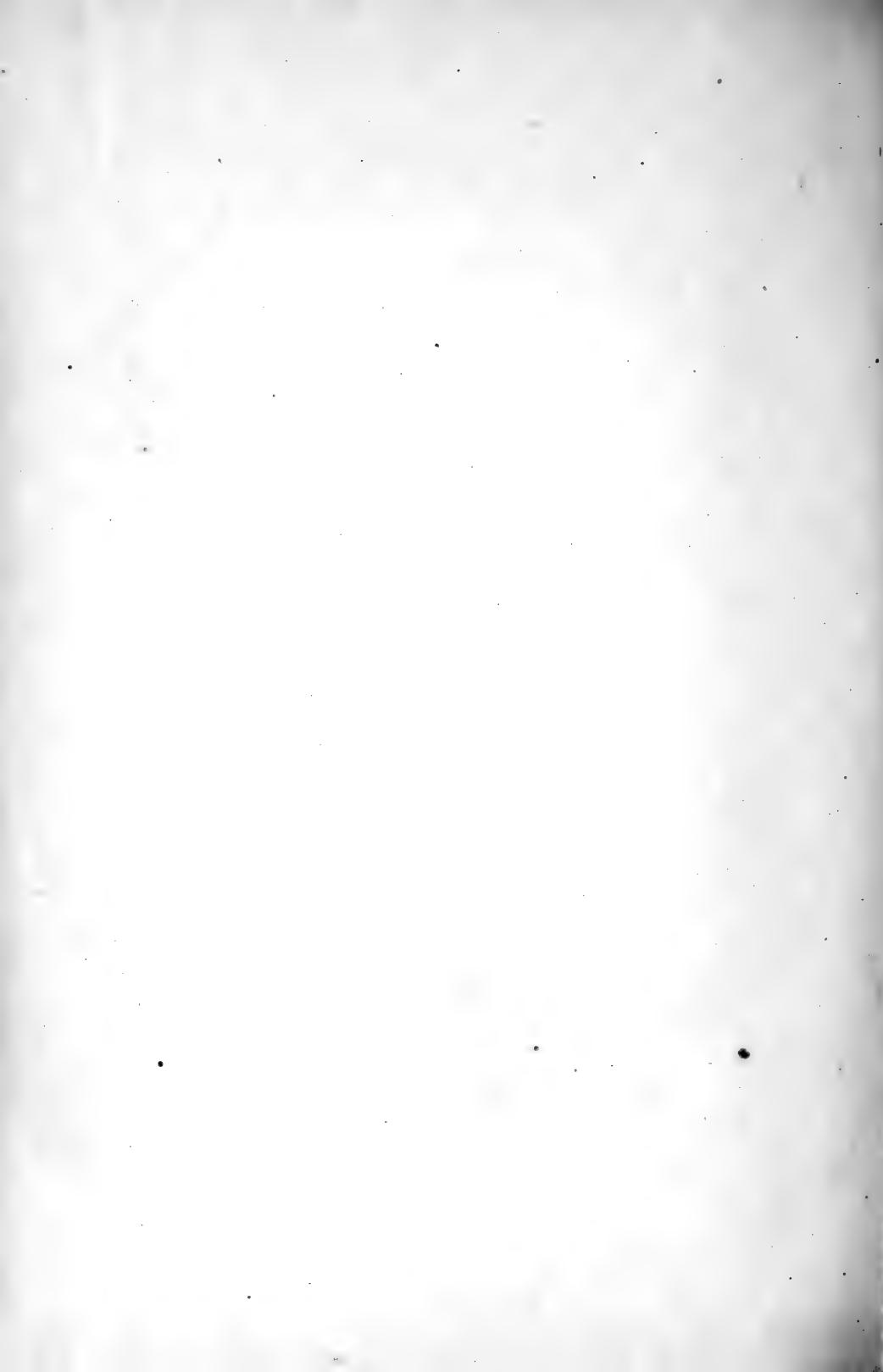
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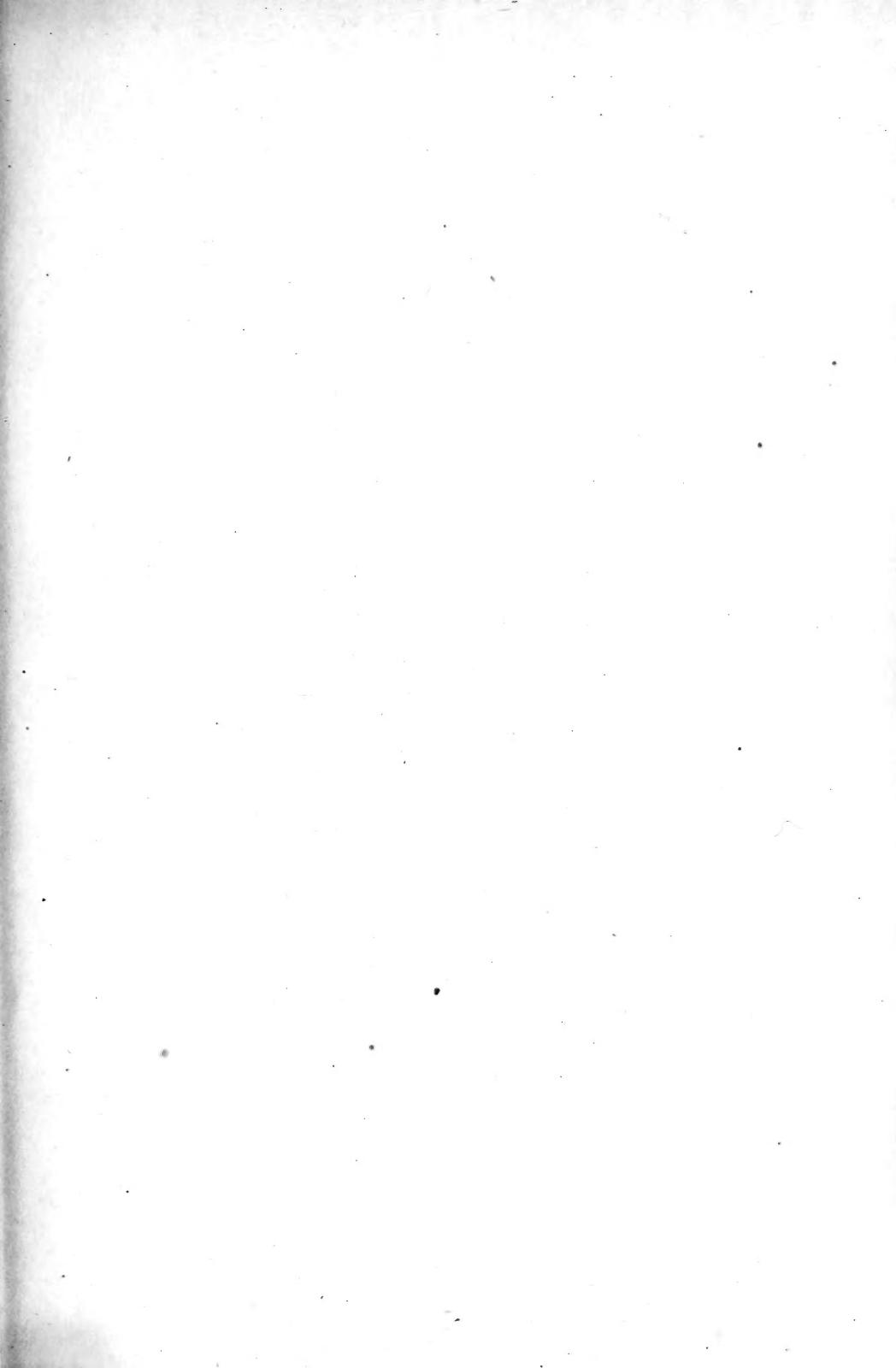
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